



Worker Health & Safety Manual

Company Policies

This manual contains all pertinent information required by the worker to perform their job in a safe and healthy manner. At any time, should the worker require seeing the complete Dolyn Construction Ltd. Health and Safety Manual, it is located at Head Office.

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Health and Safety Policy Statement

Dolyn Construction Ltd. is concerned for the well being of their employees and, accordingly, are committed to providing a safe and healthy environment by providing active leadership, support, and a willingness to co-operate with employees in pursuing Occupational Health and Safety matters to protect all resources from accidental loss.

In fulfilling this commitment to protect people, their property and the environment, Dolyn Construction Ltd. and its affiliates will take the necessary steps to provide and maintain a safe and healthy work environment in accordance with industry standards and in compliance with legislative requirements.

Our Corporate Safety Policy is based upon the belief that accidents can be prevented and property damage arising from accidents can be minimized. Accident prevention is paramount for both employees and the company.

Management and supervisors will be held accountable for the health and safety of workers under their supervision. At all times, we will strive to ensure that safe and healthy work conditions are maintained in all work areas. We further ensure that all workers will receive adequate training in their specific work tasks to protect their health and safety.

The prevention of accidents and the provision of safe working conditions are the responsibility of all employees of Dolyn Construction Ltd.. Employees at every level are responsible and accountable for all precautions to protect the health and safety of themselves, their co-workers and all other people in their work environment. All contractors, sub-contractors and suppliers are required to abide by these principles.

All company functions must comply with safety requirements as they relate to planning, operation and maintenance of facilities and equipment. All employees will perform their jobs in accordance with established procedures and safe work practices. Compliance with all company safety policies, rules and provincial regulations is mandatory.

Elimination of occupational injuries and illnesses in the workplace is our goal. Through continuous safety and loss control efforts we will accomplish this goal.

The Worker Health and Safety Manual is provided so that each employee has quick access to all company safety policies and rules as they currently apply. The manual is reviewed annually and updated as required. For details about a specific situation, reference must be made to the Occupational Health and Safety Act and applicable regulations.

Dolyn Construction Ltd. recognizes that working in a safe environment is a right for its employees and further recognizes that the benefits of working in a safe and healthy work environment extend to Dolyn Construction Ltd. employees, their families and friends.

Douglas Burnside
President,
Dolyn Construction Ltd.

January 3, 2019



Emergency Response Contact Numbers

Fire:	911
Ambulance:	911
Police:	911
OPP:	1-888-310-1122
Poison Control:	1-800-268-9017
Bell Canada:	1-800-400-2255
Hydro:	1-888-664-9376
Enbridge Gas:	1-866-763-5427
Ministry of Labour (MOL):	1-800-531-5551
Ministry of Environment (MOE):	1-800-565-4923

Dolyn Construction Ltd.

Head Office:	613-224-7268
Doug Burnside	613-224-7268
Ryan Currier	613-224-7268

SP Safety Solutions

Head Office:	613-259-5575	
Toll Free	614-866-860-4103	
Stan Pokrywa	cell	613-223-4943
Matt Pokrywa	cell	613-868-3242
Lindsey Marshall	cell	613-223-9284
Jamie Boal	cell	613-913-6554
Irena Karpaviciene	cell	613-552-5452
After Hours Number		613-223-4943



Worker Rights

The Right to Know

You have the right to know about any potential hazards in the workplace. You have the right to training information on machinery, equipment, working conditions, processes and hazardous substances etc.

The Right to Participate

You have the right to be part of the process of identifying and resolving workplace H&S concerns. So speak up.

The Right to Refuse Unsafe Work

You have the right to refuse work you believe is dangerous to your health and safety or to another worker or person.

Violence, Harassment and Sexual Abuse/Harassment Prevention

Dolyn Construction Ltd. is committed to providing a respectful, supportive, healthy, safe, accessible and inclusive work environment for all employees, who are entitled to work in an environment free from violence, threats of violence, intimidation and other disruptive behavior.

We will provide a work environment free from harassment and discrimination based on race, creed, colour, national origin, political or religious affiliation, sex, sexual orientation, age, marital status, family and disability.

We expect no less from our employees than to work cooperatively and constructively with co-workers. It is through mutual respect and understanding that we will work together in creating a workplace atmosphere that is free from violence and/or harassment and for the betterment of the project.

Sexual harassment means engaging in a course of vexatious comment or conduct against a worker in a workplace because of sex, sexual orientation, gender identity or gender expression, where the course of comment or conduct is known or ought reasonably to be known to be unwelcome; or making a sexual solicitation or advance where the person making the solicitation or advance is in a position to confer, grant or deny a benefit or advancement to the worker and the person knows or ought reasonably to know that the solicitation or advance is unwelcome.

Workplace harassment means engaging in a course of vexatious comment or conduct against a worker in a workplace that is known or ought reasonably to be known to be unwelcome.

Workplace violence means:

- The exercise of physical force against a worker, in a workplace, that causes or could result in physical injury.
- An attempt to exercise physical force against a worker, in a workplace, that could cause physical injury.
- A statement or behavior that it is reasonable for a worker to interpret as a threat to exercise physical force against the worker, in a workplace, that could cause physical injury to the worker.

Worker Responsibilities

Dolyn Construction Ltd. employees will be required to:

- Work in accordance with the Dolyn Construction Ltd. H&S Program.
- Work in accordance with the Occupational Health and Safety Act and applicable Regulations.
- Be accountable for their safety and work in a manner so as not to endanger fellow workers.
- Report all hazards, unsafe actions, defective tools/equipment, accidents, injuries and illnesses to the supervisors.
- Wear, use and properly maintain Personal Protective Equipment (PPE) required by the company.

Posted Materials

The OHSA require that H&S information be *posted* on the jobsite or made *available* at the jobsite. Due to the nature of the work we perform, some projects are long-term while other jobs are short-term. When required, an H&S Bulletin Board will be used to post all required materials. On short-term jobs, H&S Binders will be made available. These binders contain most required information. Supervisors will acquaint workers with the location and contents of binders.



Personal Protective Equipment (PPE)

For personal protection on the job site workers shall avoid:

- Wearing greasy or oily clothing including gloves and boots.
- Loose, torn or ragged clothing.
- Wearing rings, neck chains, dangling earrings and other jewelry that may become entangled with equipment.

Shirts and long pants shall be worn at all times.

Gloves, respirators and specially designed protective clothing shall also be worn under certain hazardous conditions.

To be worn at all times:

- Certified green triangle 6"-8" footwear, steel toe and steel sole plate.
- CSA Class "E" industrial hard hats type I or type II.

PPE Maintenance and Fit

- When selecting PPE, ensure that it meets required standards outlined in Company PPE Policy.
- PPE should fit the wearer comfortably but must also stay securely in place. When PPE is available in varied sizes or is adjustable, be sure to choose a size/adjustment to ensure proper fit.
- Inspect and replace PPE when it is showing signs of wear or when it has been exposed to trauma i.e. when a hard hat is struck by a falling object.
- Work boots must be laced securely to the top eyelet at all times.
- Do not use any PPE unless you have been trained in its use and maintenance.

Head Protection

You must wear, at all times on the job site, a CSA-certified or Class E hard hat. Do not paint, affix any unauthorized stickers or drill holes in the hard hat. Replace damaged or cracked hard hats immediately.

Foot Protection

You must wear CSA-certified Grade 1 footwear or CSA-certified footwear with heavy-duty toe and sole protection at all times on the job site. Work boots are to be laced to the top, tied and replaced when badly worn or deteriorated. Any footwear with the steel toe exposed can be refused work until proper footwear is used.

Eye Protection

A minimum requirement on all company projects is that CSA approved eyewear appropriate to the circumstance be worn at any time there is risk of eye injury. Protection shall be - Minimum - Grade 1 industrial quality glasses with side shields, safety goggles, and welding helmets or face shields.

Hearing Protection

You must wear appropriate hearing protections whenever exposure to noise in excess of 85 dB. Hearing protection is available in three general types: disposable earplugs, reusable earplugs, earmuffs. The maximum time-weighted noise exposure limit for workers is 85 decibels over an eight-hour work shift.

Respiratory Protection

Respiratory protective equipment can prevent illness, disease, and death from breathing hazards. But the equipment must be properly selected, fitted, worn, and maintained to ensure maximum protection. Where ever possible, work areas should be ventilated to reduce hazards from dust, fumes, gases or vapours. Where ventilation is not practical, respiratory protection equipment will be provided and must be used. Training by a competent person will be provided on how to use, inspect, maintain and store the respirators properly. Generally you will only require filtering half face pieces or elastomeric face pieces.



Hand and Skin Protection

Appropriate protection must be used whenever injury or illness due to absorption of dangerous substances is possible. When wearing gloves be sure to select gloves appropriate for the hazards presented by the task.

Hazard	Gloves
Cuts and abrasions	Work gloves
Hot/cold objects	Insulated Gloves
Chemical	As specified on MSDS
Electrical – Under 300 volts	Class ‘00’ rubber gloves
Electrical – Over 300 volts	Class ‘0’ rubber gloves

Fall Protection

All workers required to work at heights will receive training of fall protection PPE upon successful completion of an MOL approved Working at Heights training course. Use, inspect, maintain and store your PPE as trained. The company and/or your supervisor will provide additional training. If you have questions - ASK!

Designated Substance Handling

Asbestos, silica, lead, etc. have particular legislation on minimum requirements that are quite specific. Management will ensure that approved procedures are in place and that SDSs are complete and up to date and are located on site. Supervisors will ensure that workers are trained as per the SDS on the proper procedures when using such products.

Traffic Protection

Reflective vests or clothing must be worn as required.

Fire Retardant Clothing

Fire Retardant clothing must be worn when required as per CSA Z462 Arc Flash Protection Policy.

Live Wire Work

Mats, shields and other protective devices or equipment, including personal protective equipment, adequate to protect the worker from electrical shock and burn must be worn when required.

Any worker required to do electrical testing on live systems as defined by regulations must wear CSA approved rubber gloves, shields, mats and V-rated tools. Coveralls must also be worn.

Education and Training

Dolyn Construction Ltd. is committed to educating and training its employees. We will provide workers with all necessary safety training. This will be done through informal discussions at safety meetings, one-on-one training, or organized and topic-specific trainings.

Keeping A-Head of it All

Keeping A-Head of it All, is a program to provide proof of training while at the same time providing critical emergency information for health care providers should the injured worker be unable to relay the information personally. With the full cooperation of the workers, management will compile medical information and training qualifications and record them on an individual *Worker Emergency Information/Training Qualification* forms. These forms will be attached to the inside of each worker's hard hat. As hard hats must be worn at all times while on any construction site, this method is perfect for ensuring all necessary information is always available.



Worker Orientation

Health and Safety Worker Orientation is the process which familiarizes the worker with legislated, company and industry standards necessary for the worker to perform their job safely. *Worker Orientation* will take place within two weeks of employment. *Health and Safety Worker Orientation* will be delivered by a competent person.

Site Specific Worker Orientation is the process that familiarizes the worker with the jobsite and work tasks necessary for the worker to perform their job safely. *Site Specific Worker Orientation* will take place whenever a worker enters a new workplace. *Site Specific Orientation* will be delivered by the supervisor in charge of the project.

Rules and Regulations

- Smoking in the workplace and company vehicles is not permitted. Only smoke in designated areas.
- No alcohol or drugs (illicit or prescription), that may impair a worker, are permitted while working. Report to your supervisor any prescription drug you are using and the possible side effects.
- The use of cell phones or other hand-held devices while driving is not permitted. Cell phone use is only permitted in the event of an emergency.
- The use of music ear buds will not be allowed on any jobsite.
- The company *Health and Safety Policy* and programs are to be followed at all times.
- Safety rules as laid down by the local authority will be strictly adhered to at all times.
- Site task requirements and regulations will be described by the supervisor and will be strictly adhered to.
- Operators of company vehicles and equipment shall have a valid and relevant driver/operator's license.
- Personal protective equipment/apparel, will be worn as directed.
- Proper lifting techniques must be used when manual lifting is required.
- Obey all rules, signs and instructions.
- Immediately report conditions that may pose a risk to people, equipment, property to your supervisor.
- Electrical equipment or circuits are to be handled only by qualified & authorized personnel.
- Do not operate any piece of equipment, unless assigned by your immediate supervisor/management.
- Do not remove “danger” or “lock out” tags placed on machinery or equipment. Safety devices must not be removed or made inoperative. Shut down and lockout machines before cleaning, oiling, adjusting or repairing.
- All defective tools or equipment are to be reported directly to the supervisor. Do not attempt to repair any machinery, electrical equipment or wiring requiring a qualified and authorized person.
- All incidents are to be reported to the supervisor immediately.
- Never use compressed air for blowing dust from clothing.
- Machine tools must be attended while in operation. Operators must not be distracted while his machine is running.
- “Rough Housing” or “Horse Play” is dangerous and will not be tolerated. It often results in injury.
- Check your equipment constantly for unsafe conditions.
- All flammable liquids, basic and acids must be kept in safe containers and properly identified.
- Materials, parts, tools, oil, grease or other articles must not be left where they may cause a tripping hazard.
- Protect yourself and fellow employees by helping keep the worksite clean and tidy at all times. Do not leave food, refuse, wrappings or rags lying around.
- Do not operate machinery unless all guards are in place.

Safety Talks

Safety Talks are often referred to as “Tailgate Meetings” or “Toolbox Talks”. They are short information talks delivered to workers. Safety Talks may take place on the jobsite, during inspections, during safety meetings or training etc. They may be strictly instructional or have a practical component that may include a demonstration on the proper use of a specific tool.

Safety Talks serve as reminders to reinforce *information the worker should have already obtained through a more formal training session*. ***In no way is a*** Safety Talk to replace formal training required by law.

The objective of a Safety Talk is to help workers to recognize and control hazards which they may be currently exposed to or that they might be exposed to in the near future. Safety Talks will be held regularly by the supervisors. Workers are encouraged to actively participate during the Safety Talks. No question will be considered ‘dumb’ and will be answered respectfully and to the best ability of facilitator.

Work Refusal

Dolyn Construction Ltd. takes every reasonable precaution to ensure the safety of the worker, however, it is possible that a worker may find themselves in a position where they believe that the work to be performed, the equipment to be used, or the physical condition of the workplace is likely to place themselves, or another worker, in a dangerous circumstance. The OHSA, section 43, identifies that at this time, the worker has the right to refuse unsafe work.

Work Refusal Procedure

Once a worker decides to exercise their right to refuse unsafe work they must follow a designated procedure:

- The employee must notify their supervisor immediately that they are refusing to perform work and why.
- Upon notification of the work refusal, the supervisor will immediately stop the work and report to Head Office.
- Management will convene an investigation team to include: the supervisor, the H&S Representative, the H&S coordinator and may also include a representative of management and, if requested, the employee refusing to work.
- If the worker chooses not to participate in the investigation they are to remain in a safe place near the workstation.
- The investigation team will investigate the circumstance and determine what corrective measures are required.
- When corrective measures are implemented, and all parties accept the situation to be safe, work may resume.
- If the worker still believes the threat remains, management will contact the Ministry of Labour (MOL).
- The MOL inspector will present a written report when they have completed their investigation.
- The company must comply with all orders issued by the inspector.
- Once the orders have been complied with, the worker must return to work.

Any worker exercising their right to refuse work will be paid their regular wages while the work refusal is being addressed – regardless of there being assigned alternate work. Refusing unsafe work is an employee’s right and, therefore, no employee will be dismissed, threatened, disciplined or suspended for exercising this right.

Enforcement

The most critical part of a H&S program is the enforcement of its policies and procedures. Therefore, the company has implemented a strict disciplinary process to deal with employees found to be in a position of non-compliance with the Company Health and Safety Program and/or the OHSA and applicable Regulations.

Actions which may result in disciplinary actions include, but are not limited to:

- Health and Safety violations.
- Willful damage to property, tools, equipment and/or machinery.
- Drug or alcohol consumption on the job.
- Disrespect to any person on the jobsite.

An incremental *Enforcement policy* which includes oral warning, written warnings, retraining and/or interviews is in place. Non-compliance of a serious nature, that may cause injury, or property damage, may result in suspension or termination.



First Aid

Without exception, all accidents, injuries and near misses must be reported to the supervisor or to head office.

A trained first aider and first aid kit will be on each site. First aid kits will be:

- Located on every jobsite, and in company vehicle.
- The appropriate size and suitably stocked.
- Pointed out to all new employees.
- Inspected and restocked at least four times a year.
- Adequately stocked and maintained to its original contents.
- Equipped with a treatment logbook.

Workers are to document any and all treatment received in the *Treatment Log* provided in each first aid kit.

Transportation, by means of ambulance, company vehicle or personal vehicle will be provided to a worker who requires medical treatment. When deemed appropriate, another company employee will accompany the injured worker. If the hospital wait is significant, and the employee’s injuries are not serious, the driver will return to work. Upon discharge from the hospital, the employee will call management to arrange for transportation home.

First Aid Procedure:

Worker	Supervisor
Obtain first aid promptly.	Provide first aid to injured workers.
Notify the supervisor immediately.	Eliminate or contain the hazard.
If necessary, be accompanied to hospital or clinic by designated individual.	Arrange for transportation and someone to go with the injured worker.
Return Injured Worker Package to the office immediately	Notify management.

Emergency Planning

Supervisors will post or have available a list of emergency telephone contact numbers at every job site. Workers will be trained in the *Emergency Plan* and all necessary emergency equipment will be provided. In the event of an evacuation, workers will meet at an identified muster station to be accounted for and to await instructions further instructions.

Emergency Response Procedures: In the event of an emergency the following list covers basic actions to be taken. They apply to almost any emergency and should be followed in sequence.

- **Stay Calm** – Your example can influence others and thereby aid the emergency response.
- **Assess the Situation** – What has happened to whom and what will continue to happen if no action is taken. What was the cause what is to be done to control, eliminate, and/or prevent further damage. Look at the big picture.
- **Take Command** – Call, emergency medical services (EMS) – generally 911 - and explain the situation. Dispatch personnel to guide emergency services on arrival. Assign tasks for controlling the emergency.
- **Provide Protection** – Eliminate further losses and safeguard the area. Control the source of the emergency. Protect victims, equipment, materials, environment, and accident scene from continuing damage or further hazards. Divert traffic, suppress fire, prevent objects from falling, shut down equipment or utilities and take other necessary measures. Preserve the accident scene; only disturb what is essential to maintain life or relieve human suffering and prevent immediate or further losses.
- **Aid and Manage** – Provide first aid or help those already doing so. Manage personnel at the scene. Take a head count - who is missing. Direct workers to a safe location. Control panic, and assign people to emergency duties.
- **Maintain Contact** – Keep EMS and management informed. Contact utilities such as gas and hydro where required.



Fire Protection

The primary purpose of a fire extinguisher is to clear a path for the worker to get out of the building. Only in the case of very small fires should the worker attempt to extinguish the fire. Extinguishers have a very short duration of discharge, usually less than 60 seconds and are not intended to put out fires but to clear an escape route.

Fire extinguishers will be placed in easily accessible locations throughout the jobsite and in company vehicles.

To extinguish the fire in your path follow the PASS procedure:

- P** Pull the pin.
- A** Aim the nozzle to the base of the fire.
- S** Squeeze the trigger.
- S** Sweep the base of the fire with back and forth motions.

Emergency Procedures

Minor Fire	Major Fire
Use fire extinguishers in the immediate area.	Sound alarm or sound three long blasts on car horn.
Send someone for help.	Leave the area and warn others on the way out.
Contact your supervisor immediately.	Contact 911, give exact location, type of fire and other potential hazards i.e. explosive materials in the area.
Cooperate with EMS when they arrive.	Begin evacuation. Keep well back of the fire.
	Cooperate with emergency personnel and investigators.

Important Tips:

- Protect escape route - Position yourself between fire and an EXIT to use extinguisher.
- When trapped - Place cloth under door. Close door between you and the fire. Signal from a window if possible.
- When caught in smoke - Drop to hands and knees, crawl, hold breath as much as possible and breathe shallow through nose using clothing as a filter.
- Use stairs to exit building - Never use an elevator.
- Use the back of hand - Check the exit door. If door is hot then do not open.
- If door is not hot - Open the door slowly while standing behind and to the side of the exit door. If fire is present when door is open, close door quickly.
- Any employee found tampering with fire extinguishers or treating them carelessly such that they may fail to function adequately will be subject to disciplinary actions as outlined in the company *Enforcement Policy*.

Eye Wash Stations:

Eye wash bottles/stations will be available on all jobsites and in company vehicles.

Hazard Reporting

Without exception, all Hazards must be reported to the supervisor.

In order to ensure a safe and healthy workplace, the Occupational Health and Safety Act mandates responsibility for safety to both employers and employees. Both are expected to be observant for any foreseeable risks and unsafe situation in the workplace, and take reasonable and practical steps to correct or avoid unsafe situations. Reporting hazards and dealing with them in a swift and effective manner is essential to a safe work environment.

Workplace Inspections

Inspections provide a systematic visual review of a worksite with the sole intent of identifying workplace hazards. They identify actual and potential hazards. Once identified, measures can be taken to either eliminate or control the hazards.

If a hazard is of such a serious nature that failure to immediately implement corrective actions could result in the injury of a worker, the supervisor will be instructed to stop work. If the worker appears to be insufficiently trained to conduct the task at hand the supervisor, will reassign the worker or, if possible, provide task specific training immediately, or arrange for the worker(s) to receive formal training.

Workplace inspections will be performed regularly. Workers are to give their full cooperation to any person(s) conducting an inspection on behalf of the company. Failure to cooperate is grounds for disciplinary action.

Accident Investigation

Even with the best Health and Safety Planning accidents may still occur. In the event of a fatality, critical injury or lost time injury the supervisor will notify head office who will contact the Ministry of Labour. An investigation will be conducted to identify the contributing factors which led to the accident so that procedures can be put in place to ensure the accident is not repeated. All employees will cooperate with the inspector.

Early and Safe Return to Work

The company values the prevention of injuries and illnesses through maintaining a safe and healthy workplace. Consistent with this value is the company's commitment to the successful recovery of injured and ill employees. Often an injured worker will be capable of performing duties that will not aggravate the injury. As required by law and whenever possible, injured workers will be offered modified work. It is the workers responsibility to accept the modified work.

Fitness for Duty

If a worker is observed by management to be possibly unfit for duty, they will be placed on medical leave until further assessment can be obtained. Emergency medical care will be immediately obtained whenever there is a question of acute illness or impairment that threatens the safety of the employee or others.

While on Dolyn Construction Ltd. premises and while conducting business-related activities off- site, no worker may use, possess, distribute, sell or be under the influence of alcohol or engage in the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance or illegal drug. Violation of this policy may lead to disciplinary action, up to and including immediate termination of employment.

The legal use of prescribed drugs is permitted on the job only if it does not impair a worker's ability to perform the essential functions of the job effectively and safely in a manner that does not endanger clients or other individuals in the workplace. Any worker, who is using a prescribed medication that might impair their ability to perform his or her job, or might create a safety hazard, should discuss the matter with his or her supervisor.

If it is determined through physician consultation that the individual is unable to perform the essential functions of their job without impairment caused by the medication or the underlying condition, the worker will be directed not to work, until able to fully perform the essential functions of their job. Workers with medical conditions are urged to work collaboratively with the company and supervisors to consider all reasonable accommodation options in order to continue to work.



Access/Egress

- Do's:**
- Erect/construct ladders, scaffold, swing stages, ramps and runways in accordance with Regulations.
 - Use stairs, runway, ramp or ladder, when working above or below ground, to access and egress from the work area.
 - Ensure adequate methods of egress from a work place, in the event of an emergency evacuation.
 - Use warning signs, tags or lockout devices whenever hazards exist.
 - Ensure all access, egress, stair, corridor, elevator and hoist way areas are illuminated, clean, clear and unobstructed.
 - Use signage for identification of exits.
 - Ensure overhead protection at all means of access and egress and above every area where a worker may be hurt.
 - Obey signage-restricting access to work areas such as electrical rooms.
 - Get permission from the supervisor if you must perform work in an area where access is denied.
 - Ensure no other unauthorized workers enter a restricted area.
 - Keep access/egress routes clear of snow, ice or other slippery materials or treat to ensure a firm footing.
 - Ensure ladders extend three feet above the upper level and are secured.
 - Keep areas at the base and upper landing clear when using a ladder.

Aerial Devices

- Do's:**
- Use vehicle-mounted devices in accordance with Sections 143-149 of the Regulations for Construction Projects.
 - Workers in an aerial device must wear an approved full body harness with the lanyard and properly tied.

Minimum Distance from Live Power lines	
Voltage Rating of Power line	Minimum Distance
750 to 150,000 volts	3 metres (10 feet)
150,001 to 250,000 volts	4.5 metres (15 feet)
Over 250,001 volts	6 metres (20 feet)

- Workers on the ground must keep clear of the vehicle when the aerial device is close to live conductors.
- Only one worker at a time must be aloft on an aerial ladder.
- In case of emergency, a hand line must be carried in the device.
- One 20-pound (18kg.) or two 10-pound multi-purpose fire extinguishers must be kept in the vehicle.

- Don'ts:**
- While aloft, workers must not climb from an aerial device to another elevated position.
 - An aerial device must not be moved closer to a live line conductor than the minimum distances allowed.
 - Do not raise or lower, extend or retract while a worker is on the ladder.

Asbestos

It is possible that workers may come across undetected asbestos when working in an older building. If you suspect that materials may contain asbestos, leave the area and notify the supervisor.

- Reasons to suspect asbestos presence include:
- If the building was constructed prior to 1970.
 - If the building has a structural steel frame.
 - If there are high pressure steam lines or other equipment exposed to extreme conditions such as high temperatures and corrosive environments.
 - Presence of a substance which crumbles easily and is loose in composition (friable).

Baker Scaffolds

- Make sure that the floor is clear of all obstructions and all holes/openings are covered.
- If the platform is to be placed to the top, place additional rails lower to stabilize the end frame ladder to help prevent the bottom from racking inward.
- Do not try to pull or “scoot” yourself from one location to another while standing on the platform.
- Lock casters to prevent scaffold from rolling out from under you.
- Do not overreach. Keep your body within the boundaries of the guardrail and scaffold section.
- Do not place ladders, horses, buckets, chairs, boxes or other such objects to gain additional standing height.
- Utilize outriggers to help prevent tipping.
- Keep work platform clear of debris.
- Keep casters clean and oiled.
- Pin, spring and nipple must be lubricated as required.

Chainsaws

A chain saw shall:

- Have a chain that minimizes the possibility of a kickback, and will stop the chain if there is a kickback.
- Be in safe operating condition.
- When being started, be held firmly.
- When being used, be held firmly by both hands.
- Have the chain stopped when not actually cutting.

Gasoline engines on mobile or portable equipment shall be refueled:

- Outdoors.
- With the engine on the equipment stopped.
- With no source of ignition, within three meters of the dispensing point.
- With an allowance made for expansion of the fuel if the equipment is exposed to a higher ambient temperature.

Do's:

- Chain saw operators shall wear CSA-approved safety eyewear, hearing protection, hard hat with face screen, safety footwear, chain saw pants or chaps, and chain saw gloves.
- Chainsaw operator training and certification for employees is mandatory in Ontario.
- A landing area shall have sufficient space cleared of hazards to ensure that workers will not be endangered.
- A tree will only be felled:
 - ♦ When all workers other than the logger felling the tree are cleared from the danger area.
 - ♦ When all snags have been cut and cleared away.
 - ♦ In such a manner that the logger felling the tree is able to stand clear of the tree during its fall.
 - ♦ Alongside or across a road only after the road has been blocked off or controlled by signaler.
- A tree can be limbed, bucked or topped only if, when severed, it cannot roll or drop on the worker.
- Chain saw operators shall inspect the work-site for physical and electrical and other hazards.
- Only qualified line-clearance cutters shall be assigned to work near where an electrical hazard exists. Safety watchers shall be necessary when cutting approaches three (3) meters to any energized conductor.
- First aid kits shall be taken to the locations of cutting operations.
- Prior to use, employees shall inspect chain saws and equipment for proper maintenance and safety deficiencies.
- Measures to control pedestrian and vehicle traffic shall be taken as necessary.
- The chain saw manufacturer's operating, cleaning, maintenance and safety instructions shall be followed.
- Chain saws shall be started and operated when co-workers are clear of the saw.
- The engine shall be stopped when the saw must be carried to another site.



- Gasoline-powered chain saws must be refueled only after the engine has been stopped and allowed to cool.
- Gasoline for chain saws must be stored, handled and dispensed only from approved safety containers.

Don'ts:

- Climbing operations are prohibited. Report to the supervisor in order to identify alternative methods.

Compressed Air

Compressed air mishaps usually involve abuse, misuse or inattention to hoses or nozzles. Lack of attention to safety or not knowing the proper procedures when handling compressed air have led to many accidents and death. Compressed air can strike you blind, deaf or dead at very low pressures.

- Use the correct personal protective equipment, including safety eyewear when handling compressed air.
- When not in use, store hoses in a cool place and protect them from the elements.
- Check all air hoses for cracks or bubbles, prior to use.
- Test any hoses that show signs of wear or damage.
- Have leaks properly repaired immediately.
- When changing tools, turn off the air supply and depressurize the line. Make sure connections are tight before turning the air pressure back on.

Don'ts:

- Don't use hoses that are longer than necessary. Longer hoses can be easily damaged or kinked. The longer the hoses, the greater the risk of rupture.
- Do not aim or point compressed air nozzles at yourself or another person.
- Do not use compressed air to blow dust off clothing.
- Never attempt to block a leak with your hand.
- Never use tape to repair the hose. This is not only ineffective, it is unsafe.

Concrete

Although concrete is not necessarily dangerous, there are precautions you should take to protect yourself from contact with crystalline silica and chromium. These are compounds added to concrete's basic ingredients of lime, gravel, sand and water to give it strength. Both can corrode human tissue; damage the lungs, cause allergic reactions and cause burns to the skin. Always use caution when working with concrete or any material containing chemicals. It's your health that is at stake.

Do's:

- Use a respiratory mask when emptying bags of cement or when grinding, drilling, cutting or sanding concrete slabs.
- Wear goggles or safety glasses with side shields when working around blowing dust or splattering concrete.
- Wear protective clothing including long pants, long-sleeved shirts and alkali resistant gloves.
- Lift with a straight back, bent legs and with the load close to your body. Don't twist at the waist.
- Protect your skin when working with fresh concrete.
- Wet concrete can cause irritation, rashes or burns if it comes in prolonged contact with your skin, eyes or clothing.
- Use waterproof pads or a dry board to protect your knees, elbows and hands when finishing fresh concrete surfaces.
- Flush your eyes and skin immediately with clean water if they come in contact with fresh concrete or concrete dust.
- Immediately rinse clothing that becomes soaked with fresh concrete or dust to prevent continued contact.
- Wear clean clothing each day. Finish the day with a bath or shower to remove all concrete traces that remain.
- Wash your hands and face well before drinking, eating, smoking or using the toilet.
- Wear waterproof boots with tops that are higher than the concrete you are working with.



Confined Spaces

Under no circumstance is a worker to enter a confined space without being trained in the company Confined Space Policy and Procedures. Working in confined spaces may expose you to various chemical and physical properties, which may result in death or serious injury.

Demolition

Construction personnel performing demolition work are exposed to many hazardous conditions and materials. Although a contractor may be concerned about employee safety, there should also be heightened awareness for the safety of the general public and the property of others.

Precautions shall be taken to prevent injury to a person on or near the project or the adjoining property that may result from the demolition, dismantling, or moving of a building or structure. Rubbish, debris, and other materials from demolition on a project may be permitted to fall or may be dropped into an enclosed designated area to which people do not have access.

All gas, electrical, and other services that may endanger persons who have access to a building or structure shall be shut off and disconnected before, and shall remain shut off and disconnected during, the demolition, dismantling, or moving of the building or structure. All toxic, flammable, or explosive substances shall be removed from a building or structure that is to be demolished, dismantled, or moved. No exterior wall of a building or structure shall be demolished until all glass is removed from windows, doors, interior partitions, and components containing glass or is protected to prevent the glass from breaking during the demolition.

Electrical Hazards

The power supply to electrical installations, equipment, or conductors must be disconnected, locked out of service, and tagged before any work is done, and while it is being done, on or near live exposed parts of the installations, equipment, or conductors as per regulation 191 (1) of the Regulations for Construction Projects.

191. (1) This section applies instead of section 190 if work is to be done on or near energized exposed parts of electrical equipment or of an electrical installation or conductor and,
- (a) it is not reasonably possible to disconnect the equipment, installation or conductor from the power supply before working on or near the energized exposed parts;
 - (b) the equipment, installation or conductor is rated at a nominal voltage of 600 volts or less, and disconnecting the equipment, installation or conductor would create a greater hazard to a worker than proceeding without disconnecting it; or
 - (c) the work consists only of diagnostic testing of the equipment, installation or conductor. O. Reg. 627/05, s. 7.

Safe work while testing electrical installations and equipment can be ensured if these minimum procedures are followed. In such situations, the company requires that work be performed in strict accordance with the procedure outlined below.

Worker Responsibilities:

- No worker, unless authorized, may test exposed energized electrical parts.
- Workers will work in compliance with the company *Diagnostic Testing Safe Work Procedures*.
- To inspect all safety equipment including PPE for defects.
- Workers shall ensure protection under the following conditions.
 - ◆ Removing covers off junction boxes.
 - ◆ Removal or opening of panel board covers.
 - ◆ Opening of disconnects, relay panels.
 - ◆ Opening motor control starters and switches; and
 - ◆ Removal of wire connectors



Minimum Requirements

Live Circuits 300 volts and under:

- Short or long sleeve cotton T- shirt. (No Buttons).
- Cotton long pants (denim jeans or equivalent).
- Class '00' rubber gloves.
- Safety glasses.
- Safety boots.
- V- rated tools.
- Voltage and Amp testers rated Category 3 1000 volts.

Live Circuits 300 volts and greater and less than 600 volts

- Long sleeve cotton T- shirt. (No Buttons).
- Cotton long pants (denim jeans or equivalent).
- Class '00' rubber gloves.
- Safety glasses.
- Safety boots.
- V- rated tools.
- Voltage and Amp testers rated Category 3 1000 volts.

V-rated tools are rated and tested for the maximum line-to-line voltage upon which work will be done.

At no time does this allow any worker the permission to work on Live Electrical Components. After the diagnostic testing is complete the worker must follow Dolyn Construction Ltd. Live Work Policy.

Arc Flash PPE kit will be available when required. Gloves will be tested every 2 years.

Any worker found to be in a position of non-compliance to the Diagnostic Testing Policy and/or the Live Wire Policy may be subject to disciplinary actions as outlined in the Dolyn Construction Ltd. Enforcement Policy.

Live Wire Work

Safe work on electrical installations and equipment can be ensured if the power supply is properly disconnected, locked out and tagged. However, circumstances may arise where disconnecting and locking out the power are not feasible. In such situations, Dolyn Construction Ltd. requires that work be performed in strict accordance with the company Live Wire Work policy.

- No worker, unless authorized, may enter a room or other enclosure containing exposed energized electrical parts.
- Workers will work in compliance with the Dolyn Construction Ltd. Live Work Procedure.
- Inspect all safety equipment including PPE for defects.
- Use rubber gloves, mats, shields and other protective equipment adequate to ensure protection in accordance with Regulation Section 189 under the Occupational Health and Safety Act (OHSA).
- When working with voltages of 300 or more, work with an assistant.
- The assistant will ensure that:
 - ♦ No unauthorized individuals enter the area where live work is being performed; and
 - ♦ In an emergency, that medical assistance and/or CPR is administered and help is summoned immediately.

Temporary Panels

- Inspect condition before installing.
- Locate in a dry area or where there is good drainage.
- Must be securely mounted and protected from weather and water.
- Must be accessible to workers.
- Must be kept clear of obstructions.
- Check that panel covers are in place and kept shut.



- Make sure that all receptacles are Type A GFCI's.
- Use only fuses or breakers of the recommended amperage.
- Ensure that the ground rod is secured in place and connected to the panel.
- Have the panel inspected by the Electrical Safety Authority (ESA).
- Identify and protect temporary panels from construction equipment and vehicles.
- Follow regulated procedures for lockout and tagging.

Temporary Lighting

- Avoid contact with the wires strung for temporary lighting. Frequent relocation of circuits can loosen connections, break insulation and create other hazards.
- Beware of tripping and shock hazards from stringers overhead and underfoot.
- Do not use temporary lighting circuits as extension cords. If a fuse blows, it can be dangerous to find your way to the panel in the dark.
- Take care that exposed wires do not contact steel doorframes in the final stages of work when temporary lines often pass through doors that may be accidentally close on them.
- Replace missing or burned-out bulbs to maintain required levels of illumination in stairwells, basements, halls and other areas. Bulbs must be caged.
- Do not modify manufactured stringers.

Elevating Work Platforms (EWP)

Workers must be instructed in:

- Operating the machine
- The daily inspections and maintenance required by the manufacturer
- The types of working surface on which the machine is designed to be used
- The maximum rated working load
- Special conditions or limitations of the machine; and
- The location of emergency controls.

Do's:

- In the raised position an EWP shall only be used on surfaces specified by the manufacturer.
- When EWPs are used to lift materials, ensure that the materials are firmly secured.
- Use required fall protection, at all times while in a lift i.e. guardrails, safety belt, fall arrest.

Don'ts:

- An EWP must not be driven in a raised position close to holes, depressions, trenches or similar hazards.
- An EWP must not bear more than its rated working load and shall be evenly distributed.
- Do not place makeshift platforms such as boxes or proper access equipment such as ladders and scaffolds on an EWP to gain access to areas above.
- An EWP platform must not be moved closer than 3 meters (10 feet) to overhead power lines, unless the device is equipped for live electrical line work and the workers on the platform are qualified for such work.
- An EWP must not be used for pulling, pushing or dragging materials.
- Overhanging loads must not be lifted on an EWP.

Extension Cords and Cables

Do's:

- Select the right cord for the job and inspect it daily for signs of damage and wear.
- Use outdoor heavy-duty cords.
- Check for cuts to insulation.
- Ensure the ground pin is intact.



- Make sure that plugs and cords are in good condition.
- Make sure that extension cords are the right gauge for the job to prevent overheating, voltage drops and tool burnout.
- Check extension cords and outlets with a circuit-tester before use.
- Make sure that cords are plugged into GFCI-protected receptacles.
- Use GFCI's when outdoors or in wet or damp locations indoors. Use cords fitted with dead front plugs .
- Protect cords from traffic, equipment, water, sharp edges, closing doors and other pinch points.
- Cables running overhead must be identified by warning signs.
- Always store extension cords in a dry safe area.

Don'ts:

- Never cut off, bend back or cheat the ground pin on three-prong plugs.
- Do not hardwire plugs into outlets; disconnecting will take too long in an emergency.

Forklifts

Do's:

- Workers must be adequately trained prior to operating a forklift.
- Check the condition of the forklift prior to each use.
- Report defects, leaks etc. to the supervisor/management immediately.
- Operator's hands should be clean and dry, particularly free of oil or grease.
- Scan the area for hazards and other workers before starting to move.
- Always travel with the forks in the lowered position - with load or without.
- Always look in the direction of travel before moving.
- All starts, stops or turns should be easy and gradual - particularly when forklift is loaded.
- Keep legs and feet inside the body of the truck.
- Ensure the load is properly and neatly stacked and, if possible, tied down.
- Place heaviest objects on the bottom and do not stack too high.
- Approach the load squarely and centrally.
- Travel in reverse if the load obstructs forward vision.
- Carry loads in the lowered position.
- Ensure that no one walks or stands under an elevated load.
- When leaving the forklift for any reason, the forks should be lowered, the controls should be placed in neutral and the brakes applied

Fuel

Do's:

- All fuel must be stored in appropriate containers or tanks.
- Adequate firefighting equipment must be available in storage/refueling areas.
- Refuel a minimum of 7.5 metres from any source of ignition.
- Turn off engines and use safe work practices to prevent overflow or spillage of fuel.

Don'ts:

- Never fill a gas can in the bed of a truck with a bed liner. Static electricity may build up and ignite the can.
- Never use a portable fuel storage tank or container that is not clearly labeled as required.
- Never refuel or service a vehicle or equipment within 50 metres from any body of water.

Spills:

- Take action to stop further release of material, if safe to do so.
- Immediately report the spill to your Supervisor.
- Take steps to contain the spill if safe to do so.

Generators

A portable generator is an internal combustion engine that exhausts a deadly gas called carbon monoxide or CO. CO is odorless and colourless, and you can be overcome if the generator is indoors.

Do's:

- Follow the manufacturer’s directions for safe operation. Read the owner’s manual prior to operating the generator.
- Be sure to place the generator outside where exhaust fumes will not enter into enclosed spaces.
- Only operate a generator outdoors in a well-ventilated, dry area, away from intakes to the workplace.
- The generator should be protected from direct exposure to rain and snow.
- Always use a heavy-duty, outdoor-rated power cord to the generator.
- Make sure that the outdoor-rated power cord has a sufficient wire gauge to handle the electrical load.
- The total wattage used by tools/equipment should be less than the output rating of the generator. Too many tools on the generator could seriously damage the tools. Overloading the generator could also cause fires in the power cord.
- Ensure generator is properly grounded. Check the generator owner’s manual for correct grounding information.
- Extinguish all flames or cigarettes when handling gasoline or the generator.
- Shut off the generator before refueling. Turn off all equipment powered by the generator before shutting it down. Gasoline and its vapours are extremely flammable. Allow the generator engine to cool at least 2 minutes before refueling and always use fresh gasoline. If you do not plan to use your generator in 30 days, don’t forget to stabilize the gas with fuel stabilizer.
- Always have a fully charged, approved fire extinguisher located near the generator.
- Many generator parts are hot enough to burn you during operation. Stay away from the muffler and other hot areas.

Don'ts:

- Don’t overload the generator. All generators have a power rating. They should be used only when necessary and only to power a limited number of equipment.
- Do not store gasoline for the generator indoors. Gasoline should be stored in approved, non-glass safety containers.
- Never store gasoline near other fuel-burning sources. Vapour from gasoline is heavier than air and can travel invisibly along the floor. It could be ignited by a pilot light or other source of flame, such as an electric spark.

Heat/Cold Stress

Prolonged exposure to a hot environment may cause heat exhaustion or heat stroke - while prolonged exposure to a cold environment may cause frostbite or hypothermia.

Hot/Cold Condition	Signs and Symptoms	Treatment
Heat Rash	Red bumpy rash with itching	Change into dry clothes Avoid the heat Rinse skin with cool water
Sunburn	Red, painful or blistering and peeling skin	If skin blisters seek medical aid Use skin lotions Work inside if possible
Heat Cramps	Painful cramps in legs, stomach or arms	Move to cool area Loosen clothing Drink fluids
Fainting	Sudden fainting Cool most skin Weak pulse	Get medical aid immediately Loosen clothing When conscious give sips of water

Heat Exhaustion	Pulse weak and rapid Breathing rapid and shallow Blurred vision Skin cold and clammy Nausea and vomiting	Move out of the heat Rest Loosen tight clothing Keep head low, raise legs & feet Get medical aid immediately
Heat Stroke	Pulse rapid and progressively weaker Breathing noisy Lack of perspiration Nausea and vomiting	Sponge with cold water Cover with wet towels Using hands fan the worker Get medical aid immediately
Frostbite	Skin looks white and waxy Skin feels numb Skin is hard to touch	Warm frost bitten area slowly using body heat. If there are blisters apply sterile dressings and bandage lightly.
Hypothermia	Shivering Slurred speech Stumbling Drowsiness	Carefully move worker to shelter Keep worker awake Warm body using body heat Give warm, sweet drinks Call for medical help

When working in extreme cold environments Do's:

- **Stay warm** – wear layers of clothing to trap body heat. Cover your head with a hardhat liner. Avoid tight fitting boots. Wear mittens instead of gloves.
- **Stay dry** – Avoid wetness due to sweating, rain or snow.
- **Stay safe** – limit exposure time.
- **Avoid fatigue** – rest periodically in a shelter.
- Management/Supervisors:
 - ♦ Provide rest breaks in a warm area.
 - ♦ Encourage workers to drink hot drinks.
 - ♦ If possible provide heaters.
 - ♦ Allow frequent breaks and monitor workers closely for signs of cold stress.
- Workers:
 - ♦ Wear proper clothing (hats and mitts).
 - ♦ Wear outer layer which will repel moisture.
 - ♦ Wear extra socks but not if boots become too small.

When working in extreme hot environments Do's:

- Management/Supervisors:
 - ♦ Give frequent breaks in a cool area.
 - ♦ If possible use fans.
 - ♦ Provide unlimited cool water.
 - ♦ Make allowances for workers using PPE which might retain heat.
 - ♦ Schedule hot jobs for cooler times of the day.
 - ♦ Monitor workers closely for signs of heat stress.
- Worker Responsibilities
 - ♦ Wear light loose clothing.
 - ♦ Drink 8 oz. of water every half hour.
 - ♦ Avoid tea or coffee.
 - ♦ Avoid eating hot, heavy meals.

Heavy Equipment

Serious injuries can occur if the equipment strikes a worker, or if the equipment is rolled over. Injury accidents involving heavy equipment on construction sites have a higher probability of resulting in a fatality than many other types of accidents.

Do's:

- Only trained operators are authorized to operate any heavy equipment.
- A standardized set of hand signals should be used by the operator and signal person.
- Operators should always know exactly where all ground based workers are located.
- High visibility vests must be worn by operators and those working around heavy equipment.
- The equipment should have a back up warning alarm that can be heard by all nearby workers. Two-way radios are also valuable communication tools.
- Communication between the operator and those working around the equipment is critical. Two-way radios are a valuable communication tool.
- Heavy equipment must have a rollover protective structure (ROPS).
- Seat belt must be worn at all times.
- When working on slopes, try to avoid moving across the face of the slope. Try to operate up and down the slope face if possible. Use extreme caution when operating near open excavations.
- Wear hearing protection when required.
- Inspect and service the equipment regularly.
- A pre-shift walk around inspection by the operator is required.

Don'ts:

- Never jump onto or off the equipment. Operators should always use the three-point contact rule when climbing onto or off heavy equipment. The three-point rule means having both feet and one hand, or one foot and both hands in contact with the ladder access at all times.

Hoisting and Rigging

Material, articles or things required to be lifted, carried or moved, shall be lifted, carried or moved in such a way and with such precautions and safeguards, including protective clothing, guards or other precautions as will ensure that the lifting, carrying or moving of the material, articles or things does not endanger the safety of any worker.

Lifting devices

- Must be examined by a competent person to determine its capability of handling the maximum load as rated, prior to being used for the first time; and as often as necessary as recommended by the manufacturer.
- Be plainly marked with the maximum rated load that the device is capable of lifting under any operating conditions.
- Have a cab, screen, canopy guard or other adequate protection for the operator.
- When it is a pneumatic or hydraulic hoist, have controls that return to their neutral position when released.
- A lifting device shall be operated by a competent person.
- No part of the load shall pass over any worker.
- Where a worker may be endangered by the load, guide ropes must be used to prevent uncontrolled motion.
- When its load is in a raised position an operator attends the controls.
- Hoisting controls operated from other than a cab or cage shall:
 - ♦ Be located so that they can be operated at a safe distance from a load being lifted.
 - ♦ Automatically return to their neutral position when released.
- No crane or similar hoisting device shall be subjected to a load greater than its rated load-carrying capacity.
- Every hoisting hook shall be equipped with a safety catch.
- A hoisting hook shall have its load rating legibly cast or stamped in a location where easily seen.
- A hoisting hook shall not be used if it is damaged in any way.
- Only an alloy steel chain or a chain manufactured for the purpose shall be used for hoisting.

- No alloy chain shall be annealed or welded.
- Hoist operators shall be trained and qualified.
- Operators are to use a signal person who is wearing a fluorescent vest.
- Lifting devices shall be inspected by a qualified person. Deficiencies shall be reported to the supervisor.

Hot Work

Hot work is defined as any temporary maintenance, renovation, or construction by operation of a gas or electrically powered equipment, which produces flames, sparks or heat that is sufficient to start a fire or ignite combustible materials.

Do's:

- When required, complete a *Hot Work Permit*.
- Only authorized supervisors may issue a *Hot Work permit* by signing off as indicated on the permit.
- Supervisors will inspect the location where the Hot Work is to be performed and only when satisfied that all requirements of the permit have been met, will they sign off.
- Perform a *Hazard Assessment* whenever the following conditions apply:
 - ♦ Fire suppression system is not operable or does not exist.
 - ♦ Fire/smoke detection system is localized only or does not exist.
 - ♦ Special potential hazards such as work in a confined area where an increased fire risk may exist.
- Workers will prepare the work area according to the permit requirements prior to requesting a *Hot Work permit*.
- Workers will check for:
 - ♦ Combustible materials.
 - ♦ Flammable products.
 - ♦ Floor/wall penetration.
 - ♦ Fire alarm accessibility.

Housekeeping

Do's:

- Workers must clean up their work area as needed but at least daily.
- Management will arrange to have rubbish removed as required.
- Supervisor will arrange for specific cleanup tasks to be assigned to individual workers.
- Materials must be piled, stacked or otherwise stored to prevent tipping and collapsing.
- Work and travel areas must be kept tidy.
- The supervisor will ensure that work and travel areas are well lit and ventilated.
- It is the responsibility of the supervisor to ensure that signs are posted to warn workers of hazardous areas.
- Keep equipment and the areas around equipment clear of scrap and waste.
- Keep stairways, passageways and gangways free of material, supplies and obstructions at all times.
- Secure loose or light materials to be stored on roof or on open floors to prevent them from being blown by the wind.
- Pick up, store or dispose of tools, material or debris that may cause tripping hazards.
- Before handling used lumber, remove or bend over protruding nails and chip away hardened concrete.
- Do not permit rubbish to fall freely from any level of the project. Use a chute or other approved devices.
- Do not throw materials or tools from one level to another.
- Do not lower or raise any tool or equipment by its own cord or supply hose.

Hygiene

- Potable drinking water must be readily available to workers.
- Workers must be provided with a sanitary means of drinking the water.
- Workers shall not be required to share a common drinking cup.
- The supervisor shall ensure that the constructor or, when required, the supervisor shall ensure adequate toilet facilities are provided serviced, cleaned and sanitized and that workers have reasonable access to the toilet facilities.

- Each single-toilet facility will be provided with its own cleanup facility. In a multiple-toilet facility, one cleanup facility will be provided for every two toilets.
- If it is not possible to have a washbasin with running water, hand cleanser will be provided.
- Workers who handle or use corrosive, poisonous or other substances likely to endanger their health shall be provided with washing facilities with clean water, soap and individual towels.

Infection Control

Workers must be aware that appropriate infection control is an integral part of safe work practices when required to work in areas where infection is possible. Infection control plays a critical role in the health and safety of everyone involved, including health care providers, clients, workers and their families.

Knowledge of infection control practice is continually growing and thus specific clinical advice continues to evolve. However, the basic principles that underlie appropriate infection control practices and which define professional expectations in the area, remain constant.

Minimum Infection Control Practices:

As a minimum protection, workers will use one or more of the following measures:

Hand washing – Hand washing is the single most effective infection prevention and control practice.

Use of protective clothing that may include one or more of the following:

- Gloves
- Mask
- Eyewear
- Gowns
- Plastic Aprons

Disposal of PPE

Whenever possible, gloves, masks, gowns and apron should be disposed of at a medical facility. Proper disposal is essential in the prevention and control of infection.

Internal Combustion Engines

No internal combustion engine will be operated in an excavation or in a building or other enclosed structure unless there is an adequate supply of air for combustion. Gases and fumes will be ventilated directly outside in such a way as to ensure they will not re-enter the excavation, building or other enclosed structure. Note - this requirement does not apply to operations in a tunnel.

When an internal combustion engine is operating as above, carbon monoxide testing will be conducted to ensure these levels do not surpass the allowable concentrations as per Regulation 833 Control of Exposure to Biological or Chemical Agents.

All testing will be performed by a competent worker.

Internal combustion engines will be maintained in a condition that does not endanger a worker. The machine is to be locked out unless operation is necessary to complete repairs. Repairs will be performed by a competent worker in accordance with the manufacturer's instructions.

Never use an internal combustion engine:

- If it is defective
- If it is exposed to weather elements and those elements would create a danger to the worker.

Ladders

Do's:

- All portable ladders must be equipped with non-slip bases.
- Ladders must be set up on a firm level. If the base is to rest on soft or rough soil a mudsill shall be used.
- Ladders will be tied off /secured to prevent movement. If not possible, a worker will hold the base of the ladder.
- When climbing up or down, workers must always face the ladder.
- Unless suitable barricades have been erected, or other adequate protection provided, ladders must not be set up in a location where they can be struck or bumped by persons or vehicles.
- Set up ladders either 1 foot out for every 3 feet up - or 1 foot out for every 4 feet up - depending on total height.
- Ladders between levels must be securely fastened, extend 3 feet above the top landing and be clear at top and bottom.

Don'ts:

- Never stand on a rung higher than the third from the top.
- Never erect ladders on boxes, carts, tables, scaffold platforms, elevating work platforms or on vehicles.
- Do not use metal ladders or ladders with wire reinforcing near energized electrical conductors.
- Never use defective/damaged ladders. Do tag them and have them removed from the worksite.
- Never use ladders horizontally as substitutes for scaffold planks, runways.

Lock Out/Tag Out (LOTO)

Sudden and unexpected release of energy from a machine or a piece of equipment can prove fatal. The Regulation for Construction Projects Sections 190(4) states: *The power supply to electrical equipment, installations or conductors shall be disconnected, locked out of service and tagged ... before any work begins, and kept disconnected, locked out of service and tagged while the work continues.*

When more than one worker is involved in managing, administering or completing work on energized equipment, devices and systems, then each worker will apply a lock and tag to the locking device and only when all tags are removed will the equipment, device or system be re-energized.

The **only** time locking out is not required is if, and only if:

- In the case of conductors, they are adequately grounded with a visible grounding mechanism.
- In the case of equipment or installations,
 - ♦ The power supply is less than 300 volts and the equipment or installation was manufactured with no provision for a locking device. If this is the case, then the worker will apply an adequate locking device.
 - ♦ The power supply is 300 or more volts but not more than 600 volts and the equipment or installation was manufactured with no provision for a locking device and a second worker supervises the equipment or installation to ensure the circuit is not inadvertently energized.

Lock Out/ Tag Out Procedures

- 1 Familiarize yourself with your work area. Identify equipment, machinery and other systems that will be worked on.
- 2 Identify **all** energy sources affecting the equipment, machinery and other systems that you are required to work on.
- 3 Identify the parts to be locked out or isolated. Inform the client of what has to be done.
- 4 Determine the method of lockout.
- 5 Notify all personnel affected. This may include building occupants or other trades etc.
- 6 Obtain a lock(s) from the supervisor.
- 7 Shut down the equipment.
- 8 Install lockout devices, complete with tag.
- 9 Tag and record all equipment, devices and systems that have been locked out.
- 10 Verify a zero-energy state. Try to start the equipment, device or system.
- 11 Do the work.
- 12 Only when safe, communicate that the work has been completed, clear the area and remove **only** your tag.



- 13 Reactivate or reenergize the equipment, device or system.
- 14 Return lockout equipment to designated person.

Machine Guarding

OHSA Regulation 109 states: “Every gear, pulley, belt, chain, shaft, flywheel, saw and other mechanically-operated part of a machine to which a worker has access shall be guarded or fenced so that it will not endanger the worker”.

Do's:

- Confine long hair to prevent entanglement in any rotating parts.
- Always use machine guards provided.
- Know how guards work.
- Manual cleaning, oiling, repairing or adjusting guards must never be done while machinery is in motion - lockout.
- Check guards regularly and report defects to the appropriate person.

Don'ts:

- Avoid wearing gloves when working around moving machinery.
- Do not wear any loose clothing or dangling jewelry near rotating machinery parts.

Masonry

When lifting a scaffold frames:

- Use forklifts when possible.
- Limit the weight you lift from the ground to 51 pounds.
- Lift or carry only one frame at a time.
- Use proper lifting techniques. Use your legs – not your back – to lift the load, and keep it close to your body.

Lifting scaffold planks:

- Use forklifts when possible.
- Lift or carry only one plank at a time.
- Use proper lifting techniques. Use your legs – not your back – to lift the load, and keep it close to your body.
- Get help from other workers when lifting wet or heavy planks.
- Keep planks clean – remove mortar, ice, mud, etc.

Mixing mortar:

- Consider using a silo mix.
- Use a mechanical mortar mixer.
- Use lighter bags (maximum 23 kg/51 lbs.) when you can.
- Store bags above ground level so that you're lifting from between chest and knee-height.
- When lifting, keep the load close to your body.
- Rotate to other tasks when you can to give these muscles a break.

Transporting material to the work area:

- Practice good housekeeping.
- Use mechanical assistance such as forklifts, power buggies, and power wheelbarrows.
- Use tools such as brick tongs and brick carts.

Material Handling

Do's:

- Plan your move. Size up the load and make sure your path is clear - and get help and use a cart or other materials handling equipment if possible.
- Use a wide-balanced stance with one foot slightly ahead of the other.



- Get as close to the load as possible.
- Tighten your stomach muscles as the lift begins.
- When lifting, keep lower back in its normal arched position and use legs to do the lift.
- Pick up your feet and pivot to turn. Do not twist your back.
- Lower the load slowly, maintaining the curve in your lower back.
- When doing repeated lifting, avoid twisting your body under the load.

Lifting Heavy Objects

Do's:

- Raise the object upright.
- Put one knee down against the object.
- Pull the object up your leg, using your leg for support.
- If possible, rest the object on the edge of the knee.
- Stand upright.

Don'ts:

- Don't bend over and try to lift the object all at once.

Shoveling

Do's:

- Keep feet wide apart. Front foot close to the shovel.
- Put weight on front foot. Use leg to push the shovel.
- Shift weight to rear foot. Keep load close to the body.
- Turn your feet in direction of throw.

Don'ts:

- Avoid twisting the body while shoveling.

Weight Transfer

Do's:

- Pull the material to be lifted towards you.
- Transfer your weight to the leg closest to the load.
- Lift on to the level required. Do not over-lift.
- Shift your weight to the other leg as the load moves towards that leg.
- Push weight into position.

Balancing a Load

Any activity that unevenly loads the spine may aggravate your back.

Do's:

- Avoid one-handed carrying.
- Try to distribute the weight evenly on each side.
- If you can't avoid one-handed carrying, such as with a single pail, hold the free arm straight out to the side as a counter balance.

Lifting by Two Persons

Lifters should be of similar height to distribute the load evenly. Plan the lift strategy and decide who will take charge.

Long Load

For a long load, the lifter who takes charge must see that each person carries the load on the same side of the body and that the person in front has a clear view ahead.

- Lift load from ground to waist height.



- Lift load from waist to shoulder height.
- When carrying long, flexible loads walk out of step to avoid excessive bounce.

Up and Down Stairs

Take care with loads up & down stairs. Improper carrying can subject the spine to excessive forces. Use stomach muscles to help support and protect your back. Position the taller and/or stronger person at the bottom, where the load is the

Mold

Molds are present in dark, moist environments and can grow at room temperature on various construction materials including wall paper, particleboard, ceiling tiles, drywall and plywood. Construction workers can be exposed to toxic spores when working on buildings with water damage from flooding, plumbing leaks, or leaks in the structure itself.

Do's:

- Where mold is observed, it should be left undisturbed if possible.
- Report to the supervisor.

Noise

Waiting for discomfort before taking preventive measures may be too late to avoid a permanent noise-induced hearing loss. If required a sound level meter (SLM) will be used to ensure noise levels remain within prescribed acceptable levels. There are a number of options when considering hearing protection devices (HPD):

Earplugs:

- Earplugs should conform to the latest issue of CSA Standard Z94.2.
- For proper fit insert the earplug by reaching one hand around the back of head, pull ear upwards and then insert plug with other hand.
- Earplugs must be fitted snugly in the ear canal.
- Reusable earplugs should be washed with warm soapy water daily.
- Earplugs with torn or otherwise damaged flanges should be replaced.

Earmuffs:

- Earmuffs should conform to the latest issue of CSA Standard Z94.2
- The cup part of the earmuff should fit snugly over the entire ear and be held firmly in place by a tension band.
- The cup and band should not be so tight as to cause discomfort.
- Cup, cushion and band should be checked for possible defects such as cracks, holes or leaking seals prior to use.
- Because band tension can be reduced over a period of time, the band may require repair or replacement.
- Defective or damaged parts should be repaired or replaced as needed.

The following chart contains industry-accepted standards:

Maximum permitted daily duration in hours	Decibels (dB)	Tips on Identifying
8	85	If someone standing a meter away from you has to shout to be understood, the sound levels probably exceed 85 dB. You face a significant risk of permanent hearing loss if you are exposed to these sound levels for eight hours or more per day.
4	88	
2	91	
1	94	If someone standing 30 cm away has to shout to be understood, the levels probably exceed 95 dB. This means a significant risk of permanent hearing loss if you are exposed for about 45 minutes or more per day.

1/2	97	
1/4	100	If someone has to shout into your ear to be understood, the sound levels around you probably exceed 105. This poses a significant risk of permanent hearing loss if you are exposed for just 5 minutes per day.

Overhead Power Lines

The most common cause of power line contact involves operators failing to recognize their proximity to power lines.

Do's:

- Before commencement of work, workers will always:
 - ◆ Check the work area for overhead power lines.
 - ◆ If applicable, determine power line voltage by checking voltage on poles or by calling the utility company.
 - ◆ Maintain minimum allowable distances.
- Should an electrical hazard be identified, operators shall follow the following safety measures starting with step one.
 - 1 De-energize the lines - and only if not possible go to step 2.
 - 2 Add barriers to prevent physical contact with energized lines - and only if not practicable go to step 3.
 - 3 Maintain appropriate distances from energized lines - this should be your last choice.

Where compliance with these work procedures is inadequate to control the risk of exposure to an electrical hazard due to an unusual factor in the nature of the work, such as the location or condition of the workplace, a competent person, who is not actively engaged in the work, shall be designated as a safety signaler - *Traffic Signaler* section.

Powder Actuated Fastening Tools

Powder Actuated Fastening Tools use a powder charge to fire a fastener into hard materials such as concrete and masonry. Used improperly, powder-actuated tool can pose obvious hazards. The tools should be treated with the same respect as a firearm.

Do's:

- Only authorized workers may use powder actuated fastening tools. Authorized workers must have completed a comprehensive training program. Proof of training must be carried with the worker at all times on a construction site.
- The operator must wear hearing protection, impact-resistant eye protection and a face shield. Heavy shirts and pants provide some protection against ricochets and flying fragments of materials and fasteners.
- Prior to use workers must ensure that the tool is not loaded and must perform a visual and practical pre-inspection of tools before use. Inspections must be thorough and complete as outlined in training and in the operator's manual.
- Powder-actuated tools must be used, handled and stored properly.
- Load the tool immediately before firing.
- Don't walk around with the tool loaded.
- Do not use tool in areas where there may be exposure to explosive vapours or gases.
- Cartridges must be marked or labeled for easy identification.

Don'ts:

- Never put your hand or fingers over the end of the muzzle for any reason.
- Never fire through pre-drilled holes.
- Never fire the tool from a ladder.
- Do not leave the tool unattended unless it is locked in a box.
- Never point the tool at anyone.

Propane

Characteristics:

- Propane burns cleanly, has a high heat value and has a high octane rating. In its natural state, propane is colorless, odorless and non-poisonous. A pungent chemical compound is always added so it can be detected by smell.
- Propane is heavier than air and can accumulate in low-lying areas.
- Propane can become an asphyxiant when its vapors reduce the amount of breathable air in a confined space.
- Propane presents a freeze burn hazard if its cold liquid contacts unprotected skin.
- Escaping propane can create a fire and explosion hazard.

Do's:

- Wear safety glasses and a full face shield when working with propane tanks and cylinders.
- Consult the MSDS on propane for information about its properties, handling precautions and safety considerations.
- Know and understand the safety features and the manufacturer's instructions for working with a propane-filling tank.
- Make sure propane cylinders approved for LPG storage are not damaged and do not leak.
- Open the filling valve on the propane-filling tank as a check for when it is full.
- Inspect the fuel lines, safety relief valve and other components of the fuel system.
- Use the MSDS for specific information about propane and follow company policy when handling it.
- Use a hoisting cradle to move cylinders from one level to another.
- Keep cylinders upright. Use a handcart. Never roll cylinders.
- Keep cylinders away from heat sources.
- Whenever possible, full cylinders and empty cylinders should be stored apart.
- Adequate ventilation must be provided and maintained.

Don'ts:

- Never lift or lower cylinders with a sling. This is prohibited by the construction regulations under the OHSA.
- Never hook onto the protective collar around the valve.
- Never block or close openings such as windows and doors. When the temperature in a heated area is too cold, workers should request more or bigger heaters.

Public Way Protection

No work will be carried out on a building or structure located within 4.5 metres of a public way unless a covered way is constructed over the part of the public way that is adjacent to the project.

A covered way:

- Will have an unobstructed height of not less than 2.4 metres.
- Will have an unobstructed width of not less than 1.1 metres or, if it is over a sidewalk that is less than 1.1 metres wide, have a width equal to the width of the sidewalk.
- Will be capable of supporting any load likely to be applied to it and capable of supporting a load of at least 2.4 kilonewtons per square metre.
- Will have a weather-tight roof.
- Will have the side adjacent to the project covered with a partition that has a smooth surface on the public way side.
- Will have a railing one metre high from ground level on the street side.
- Will have adequate lighting within the public way.

If work on a project may endanger a person using a public way, a sturdy fence at least 1.8 metres in height shall be constructed between the public way and the project.

Machinery, equipment and material that is being used, left or stored where it may be a hazard to traffic on a public way shall be marked by flashing devices.

Respiratory Protection

Workers are often exposed to respiratory hazards in the form of dangerous dusts, gases, fumes, mists and vapours. Every effort will be made to control respiratory hazards if possible. When this is not possible, workers must depend on respiratory protective equipment. For the purposes of work generally performed by the company, workers should only require filtering half face pieces or Elastomeric face pieces.

Dust, Gases and Fumes

All work areas must have adequate ventilation. A workplace must be ventilated if there is a possibility of a worker being injured by inhaling a noxious gas, vapour, dust or fumes or from a lack of oxygen.

Where ventilation or monitoring is not practical, workers will be provided with PPE such as respirators that are appropriate to the hazard. Workers will be trained on the proper use and maintenance of the respirator.

Do's:

- Whenever possible, open windows and doors to allow harmful vapours to escape.
- Turn off heating and cooling systems to stop vapours from circulating through the work area.
- If possible, use a box fan in an open door or window to draw vapours out or fresh air into a work area.
- Use water based products (filler, varnish etc.) if possible.
- Remove or eliminate any fire hazards from affected work areas.
- Ensure there are no open flames in the work area.

Rotary Foundation Drills

Hazard Management

Before the start of any drilling operation on a project with a rotary foundation drill rig identify potential hazards, including utilities, services, obstructions, structures and soil conditions that may endanger a worker engaged in, or in the vicinity of, the drilling operation, and buildings and structures adjacent to, or in the vicinity of, the drilling operation that may be affected by it.

All identified hazards must be removed, or, if not practicable to remove, must be disconnected or inactivated and be located and marked with signs.

A written report must be made, and kept on site, that indicates:

- All identified hazards
- Hazards which have not been removed
- Hazards that have been disconnected or inactivated.

Written Procedures

The employer responsible for a drilling operation must develop written measures and procedures to protect the health and safety of workers engaged in, or in the vicinity of, the drilling operation and ensure the written measures and procedures are provided to, and reviewed with, the workers engaged in the drilling operation.

The drilling procedure must include, at a minimum, details of:

- The sequence of activities of the drilling operation to be followed.
- The procedures to be implemented for removing excavated soil and material from an auger or drilling tool and away from the supporting surface of the drill rig.
- The location to be used for storing excavated soil and material.
- The working area and designated path of travel to be used for any machinery or equipment used in the vicinity of the drilling operation so that the machinery or equipment does not affect the stability and integrity of the supporting surface of the drill rig.

- The measures and procedures to be implemented during the drilling operation to ensure that unresolved hazards do not endanger workers.
- The areas that have been designated at, or in the vicinity of, the drilling operation where, only persons authorized by the employer are allowed to enter, and no persons or equipment are allowed to enter.

The employer must ensure that the drilling procedure is implemented; and followed by the workers.

Operators

A worker who operates a rotary foundation drill rig must:

- Be qualified having completed a recognized training program.
- Demonstrate to the employer that they are proficient in operating the drill rig to be used at the project.
- Be authorized by the employer to operate the drill rig at the project.
- If operating a drill rig have a certificate of qualification issued under the Ontario College of Trades and Apprenticeship Act, 2009 or be an apprentice who is working pursuant to a training agreement registered under the Ontario College of Trades and Apprenticeship Act, 2009.

The employer will keep a record of the workers training and if requested will make it available to MOL inspectors.

Saws

Quick Cut Saws

- Operators of quick-cut saws should be instructed in the care, maintenance and operation of the tool. The operating manual should be kept on the job and read by users.

Use of the Saw

- Set one foot on the rear handle, put one hand on the top handle to lift the blade off the surface and use the other hand to pull the starter cord.
- Grip the saw firmly with one hand on each handle. Hold your arms forward and straight to keep the saw from kicking back or climbing out of the cut.
- Once the saw is running, release the throttle and make sure the engine drops to idle without the disk or blade moving.
- Run the engine at full throttle and let the disk or blade run freely to make sure it turns on the arbor without wobbling or vibrating.
- The saw is powerful enough to throw material around unless it is securely held and supported. Standing on material to hold it down is **not** recommended.
- To avoid kickback, take the following precaution:
 - ♦ Run the saw at full throttle;
 - ♦ Do not cut above chest height;
 - ♦ When re-entering a cut, do so without causing the blade or disk to pinch;
 - ♦ Secure and support material at a comfortable position before cutting. Make sure that material will not move, shift or pinch the blade or disk during cutting;
 - ♦ Keep steady balance and solid footing when making cut; and
 - ♦ Use both hands to control the saw. Maintain a firm grip with thumb and fingers encircling the handles.
- For cutting, keep the throttle wide open. Ease the blade down onto the cut line. Don't drop or jam the blade down hard. Move the saw slowly back and forth in the cut.
- Hold the saw so that the disk or blade is perpendicular to the work - use only the cutting edge of disk or blade. Never use the side of a disk for cutting. A worn disk will shatter and cause severe injury.
- Don't force the saw to one side of the cut. This will bend the disk or blade and cause it to bind and possibly break.
- Water-cooling is recommended for cutting masonry materials. It prolongs disk life and reduces dust exposure.

- Keep pressure on the saw reasonably light. Although more pressure may be necessary for hard materials, it can cause an abrasive disk to chip or go “out of round”. This in turn will make the saw vibrate. If lowering the feed pressure does not stop the vibration, replace the disk.
- Don’t carry the saw with the engine running. Stop the engine and carry the saw with the muffler away from you.

Jigs

- Jigs can be used to secure and safely cut masonry units.
- With a brick jig the saw operator stands on the plywood sheet to prevent movement and the jig is sized to hold the brick with minimum clearance.
- The concrete block jig is slightly tipped so that the weight of the blocks helps hold each other in position.

Blade Inspection and Installation

- Make sure that contact surfaces are flat, run true on the arbor and are free of foreign materials.
- Check the flanges are the correct size and not warped or sprung.
- Check the label or stampings to ensure that the disk or blade is approved for use on high-speed saws and has a rated rpm suitable to the saw. Some tile/marble saws turn as high as 15,000 rpm. With the new and improved blades on the market, make sure that the rpm of your saw still meets the manufacturer’s blade speed requirements.
- Inspect the blade or disk for damage. Abrasive disks tapped lightly with a piece of wood should ring true. If the sound is dull or flat, the disk is damaged and should be discarded.
- Make sure that diamond tips are in place and that the blade is being mounted to turn in the right direction. If any tips are missing from a blade discard it immediately.
- Do not drop abrasive blades. Once blades have been dropped accidentally, discard them. Blades should not be tossed into a toolbox or struck by carelessly handling the saw. Blades abused in this manner may sustain hairline fractures invisible to the eye. The blades may fragment and fly apart when used the next time.
- Use the proper bushing on the arbour so disks run true on the shaft without wobbling or vibrating. The use of reducer bushings is *not* recommended.
- Always remove abrasive and diamond blades before transporting or storing a saw to avoid blade damage.

Scaffolds

- The erection and dismantling of scaffolds must be carried out under the supervision of a competent worker.
- Workers erecting and dismantling a scaffold more than 2.5 meters (8 feet) high must be tied off with a full body harness and lanyard equipped with a shock absorber.
- Scaffolds must be adequately braced horizontally and vertically.
- Scaffolds must be equipped with guardrails with a top rail, mid-rail & toe board.
- Scaffold platforms must be at least 46 centimeters (18 inches) wide and if they are over 2.4 meters (8 feet) height they must be planked across their full width.
- Scaffolds must be tied in to a building at vertical intervals not exceeding three times the least lateral dimension, including the dimension of any outrigger stabilizing devices.
- Where scaffolds cannot be tied in to a building, guy lines adequately secured should be used to provide stability.
- Scaffold frames must be properly pinned together where scaffolds are two frames or more in height or where they are used as a rolling scaffold tower.
- Scaffold planks must be securely fastened to prevent them from sliding.
- Scaffold planks must be of good quality, free of defects such as loose knots, splits or rot, rough sawn, measuring 48mm X 248mm (1 7/8” X 9 3/4”) in cross section, and No. 1 spruce or better.
- Scaffolds must be erected, used and maintained in a reasonably plumb condition.
- Scaffold planks must be installed so that they overhang by at least 15 centimeters (6 inches) but no more than 30 centimeters (12 inches).
- Scaffolds must be equipped with a ladder for access. Vertical ladders must be equipped with 15-centimeter (6”) standoff brackets and a ladder climbing fall protection device or safety cage when they are more than 3 meters (10’).



- Frame scaffolds over 15 meters (50 feet) high and tube-and-clamp scaffolds over 10 meters (30 feet) high must be designed by a professional engineer and constructed in accordance with the design.
- Remove ice, snow, oil, grease and other slippery material from the platform, and apply sand to the surface.
- Wheels or casters on rolling scaffolds must be equipped with a braking device and securely pinned to the scaffold .

Spills

Workers will be trained in the procedures to be taken in the event of a hazardous chemical spill. Training will include how to contain spills, how to clean up spills, recognizing hazards and clean up, and limits on ability to clean up.

An appropriate size spill kit will be kept on site and stocked with a variety of absorbent pads, pillows, booms, and plugs as well as other materials necessary to help contain and clean up spills of any size that makes me expected on the operation.

Do's:

- Report any and all leak or spills to your supervisor.
- If a spills threaten lives or may have significant environmental threat, report it immediately. If you cannot reach someone in the company, then report directly to the device Ministry of the Environment.
- Include the following when talking to the Ministry of the environment:
 - Give good directions to spill site.
 - Do not hang up until directed to do so.
 - Record the name of the person you spoke to and the time you spoke to them.
 - Write a brief report including calls made, public agencies answers and responses, and action taken by you and others.

Handling the Spill

If the material is listed as hazardous or you do not know what it is:

- Do not attempt containment or clean up.
- Stay a safe distance away.
- Allow no one to enter the area and use flagging if necessary.
- Large volumes of gasoline or other volatile substances should be avoided.
- Call and wait for the first response team.

If the material is known and not hazardous:

- Stop the release if you have been trained and fire and other dangers do not exist.

Stilts

Effective January 1, 2010 the use of stilts on construction jobsites in Ontario is permitted under limited, specific, controlled conditions. The requirements can be found in Section 116 of the Construction Regulations. Workers will only be permitted to work with stilts if there is compliance to all conditions.

The MOL considers the improper use of stilts to be a ticketable offence. Under the discretion of the MOL inspector, additional enforcement may be taken.

- Stilts may only be used on residential worksites for drywall finishing work and installation of insulation including vapour barriers. Note that in mixed condo construction the stilts would only be allowed in the residential units and area used for residential purposes such as hallways, lobbies, recreation areas, laundry room etc. but would not be allowed in the retail areas.
- Stilts must be commercially manufactured, made of unpainted metal and have a non-slip surface on the bottom of the plate.
- Stilts may only be used to a maximum height of 30 inches measured from the work surface to the top of the footplate.
- Stilts may only be used on work surfaces that are:



- ◆ Made of rigid material.
- ◆ That is level or on slopes not exceeding 3%.
- ◆ Where openings are adequately covered or guarded. See below.
- ◆ Free from debris and all other tripping hazards.
- ◆ Where obstructions that cannot be removed are adequately guarded, placed or secured to prevent a worker from being injured.

- Openings include but are not limited to:
 - ◆ Floor heating vents
 - ◆ Window and patio door openings
 - ◆ Sunken living rooms
 - ◆ Stairwells
 - ◆ Elevator shafts

- Guardrails
 - ◆ Guardrails include those installed on window and patio door openings etc.
 - ◆ An additional top rail shall be installed on the guardrail to a height equal to the height of the stilts being used in the area.
 - ◆ An intermediate rail shall be installed between the additional top rail and existing top rail of the guardrail if the distance between the additional top rail and existing top rail is greater than 20 inches.
 - ◆ The supporting guardrail must be capable of supporting any load it could be subjected to by a worker using stilts.

- Inspections
 - ◆ Stilts will be inspected prior to use, for damage, wear, corrosion and other defects.
 - ◆ Identified defects have been replaced or repaired and the stilts are in good working order.
 - ◆ Stilts shall be stored, serviced and maintained as stated in the manufacturer's instructions.

Suspended Work Platforms and Boatswain's Chairs

It is company policy to comply with Regulations regarding the use, and maintenance of suspended work platforms and boatswain's chairs.

- Only authorized personnel may work with or around suspended work platforms and boatswain's chairs.
- A competent worker will be responsible for the installation, inspection and testing of a suspended work platform system or boatswain's chair
- A site-specific work plan for a suspended work platform system or boatswain's chair is required
- A worker who is on or is getting on or off a suspended work platform or boatswain's chair and who may be exposed to a fall hazard will wear a full body harness connected to a fall arrest system.

Under no circumstance is a worker to work with or around suspended work platforms and boatswain's chairs. without being trained in the company policy and procedures.

Tools and Equipment

Do's:

- Perform a visual inspection as required by the company of any tool/equipment before it is put into use.
- Never use defective/damaged equipment. Tag them and have them removed from the worksite.
- Only perform a pre-use inspection if you are competent to do so.

Tool Use and Maintenance

Workers need safe and reliable tools. To make sure they stay that way, you have to inspect and maintain them regularly.

Do's:

- Use grounded or double insulated tools. Make sure the casings of double-insulated tools are not cracked or broken.
- Use a ground fault circuit interrupter (GFCI) with any portable electric tool operated outdoors or in wet locations.
- Use hand tools with insulated handles and grips.
- Whenever required, wear protective equipment – safety goggles or insulated gloves.
- Before drilling, hammering or cutting with hand or power tools, check for electrical wires or equipment behind walls, above ceilings and under floors.
- Keep cords out of the path of electric tools and equipment.
- Disconnect tools completely and discharge pressure, from power source before inspecting and maintaining them.
- Any shock or tingle, no matter how slight, means the tool or equipment should be checked and repaired if necessary.
- Make sure that the power cord is not cut, frayed or otherwise damaged.
- If the ground pin is missing on the cord, get a qualified person to repair it.
- If the tool is double insulated (no ground pin on cord), inspect the tool casing for cracks. A cracked tool can be an electrical hazard.
- Make sure that all guards and safeties are in place and in good condition. Never remove a guard or jam a safety to prevent it from working.
- Make sure all cutting and drilling tools are sharp. Dull tools can jam.
- Always store tools in a dry, safe place.

Don'ts:

- Never operate tools or equipment unless you are competent to do so.
- Do not hold grounded conductors when using electric tools.
- Never bypass broken switches on tools or equipment by plugging and unplugging the cord.
- Never use metal or metal-reinforced ladders near live wires or equipment. Use wooden or fiberglass ladders.

Tower Cranes

Professional Engineer

- Before a tower crane is erected at a project, a professional engineer shall ensure that the structural elements and components of the crane be subjected to non-destructive testing to ensure the structural integrity of the crane.
- The professional engineer conducting an inspection or under whose direction an inspection is done shall prepare a written report of the test results.
- The constructor shall keep the report at the project while the crane is erected.
- A professional engineer or a competent worker designated by a professional engineer shall visually inspect for defects the structural elements and components of a tower crane after the crane is erected and before it is used and at intervals not greater than twelve months.

Repairs

- Any defects found during an inspection are repaired in accordance with the instructions of the crane's manufacturer or a professional engineer.
- A professional engineer or a competent worker designated by a professional engineer shall inspect a tower crane that has been repaired to ensure that the defects are corrected.
- The professional engineer conducting an inspection or under whose direction an inspection is done shall prepare a written report of the test results.
- The constructor shall keep the report at the project while the crane is erected.

Automatic Limit Switches

A tower crane shall have automatic limit switches and automatic overload limit devices that prevent :

- Overloading at relative radii.
- A load from reaching beyond the highest permissible position specified by the manufacturer.
- The trolley from reaching beyond the permissible travel limit specified by the manufacturer.

In addition to automatic limit switches and overload limit devices, a tower crane shall have such other switches and devices as the manufacturer specifies.

A competent worker will perform operational tests on a tower crane to ensure that its automatic limit switches and overload limit devices are installed and functioning in accordance with the manufacturer's specifications.

Slew

A tower crane boom shall be able to slew freely when the crane is unattended except when the boom may collide with another crane, a structure or another object or to slew freely would be contrary to the written procedures of the crane's manufacturer.

When a tower crane boom is not permitted to slew freely it shall be secured in accordance with the written procedures of the crane's manufacturer.

Load Block

A load block of an unattended tower crane will be left empty at the top position and located at minimum radius.

Other

- The track bed of a rail-mounted tower crane shall have a sound and rigid base capable of carrying all loads to which it is likely to be subjected without deformation or settlement which affects the stability of the crane.
- The undercarriage of a rail-mounted tower crane shall be fitted with rail clamps that can be firmly attached to the rails to lock the crane in position.
- A rail-mounted tower crane shall be locked in position on the rails when not in use.
- A rail-mounted tower crane shall have rail stops or bumpers that extend at least as high as the centre of the undercarriage wheels and that are securely attached to the rail at both ends.

Traffic Signaler

A traffic signaller is any person who assists in the direction of on-site traffic. The use of traffic signalers is vital to reducing the hazards associated with backing up. One-way traffic flow and the avoidance of backing up are the best methods to eliminating this hazard. Traffic Signalers are to be used as a last resort but, if required, should be:

- A competent worker.
- Not performing other work while directing traffic.
- Positioned in such a way that he or she is endangered as little as possible by vehicular traffic.
- Adequately trained.
- Trained in the standard hand signals for on-site traffic.

Signaler will:

- Know and use the standard hand signals for on-site traffic.
- Understand maneuvering limitations of vehicles.
- Know driver blind spots.
- Warn workers on foot to keep clear of blind spots.



- Make eye contact with driver before signaling or changing locations.

Workers will:

- Make eye contact with vehicle operators before approaching.
- Signal their intended movements to the vehicle operator.
- Be aware of blind spots around the vehicles.
- Avoid standing and talking near vehicle paths and other areas where equipment is moving back and forth.

Drivers and Operators will:

- Always acknowledge and maintain eye contact with the signaler.
- Obey signalers instructions.
- Where there is more than one signaler, exit the vehicle and establish which signaler you are to obey.
- When your view is obstructed, *never* back-up without the aid of a signaler.
- Remain in the cab, if possible, where other equipment is backing up.
- Make sure all mirrors are intact, functional and adjusted for the best view.
- Stop the vehicle when a worker, signaler or anyone else disappears from view.
- Blow the horn twice before backing up.
- When no signaler is present, get out, quickly walk around the vehicle and back up at once if the way is clear.

Traffic Control

Do's:

- Use any and all PPE required including seat belts.
- Follow any and all procedures specified by the company.
- Before operating your vehicle, perform a circle check and record results.
- Get help from a designated signaler before:
 - ♦ Backing-up.
 - ♦ When you don't have a clear view of your path of travel.
 - ♦ When you don't have a clear view of workers in your vicinity.

Traffic Control on Public Roads

- Workers will direct traffic only where the operating speed of the roadway is less than 90 km/hr.
- Workers will direct traffic only if there is a maximum of one lane of traffic in each direction.
- A worker will not direct traffic in more than one direction.
- Workers directing traffic will wear a reflective vest, and must use the STOP/SLOW paddle as prescribed.
- Workers, directing traffic, will be positioned off the traveled portion of the roadway until traffic is stopped.
- Workers, directing traffic, will have a clear view of approaching traffic at all times.
- Signage will comply with the Ministry of Transportation (MTO) *Manual of Uniform Traffic Control Devices*.
- Workers will be protected by vehicles having a flashing orange caution light, parked in a manner to protect the workers from approaching traffic.
- Automated signals or traffic control devices will be used to direct traffic where speed and other conditions make the work hazardous for workers using signs.

Traffic Control Devices

All projects adjacent to, or encroaching on, live traffic must comply with the Ministry of Transportation (MTO) *Manual of Uniform Traffic Control Devices*.

- All traffic control devices shall be maintained in good condition as visibility is the primary concern.

Method for Placement of Traffic Control Devices:

- All traffic control devices shall be erected in the recommended sequence to provide uniformity in the *Manual of Uniform Traffic Control Devices for Canada* (MUTCD).



- The devices shall be erected as per the appropriate table in the MTO *Traffic Control Manual* which considers visibility, volume and speed.
- Workers responsible for placing traffic control devices will be fully instructed in what is being placed, the order of placement, and exactly when the devices are needed.
- Workers will be trained in the proper method of installing devices to minimize exposure to moving traffic.
- Workers will position themselves to face oncoming traffic.
- When placing or removing device on the roadway, workers will keep the device between the worker and traffic.

Trailing Vehicle

When using a trailing vehicle, to protect workers placing devices:

- It will be equipped with an illuminated signboard, or flashing beacon.
- It will be positioned far enough behind the operation to protect workers, yet not so close that it affects their view of oncoming traffic.
- Traffic control devices should be placed *with* the traffic flow and removed *against* the traffic flow.
- Devices should be placed from beginning of the traffic control zone to the end and removed from the end of the traffic control zone to the beginning.
- The worker placing or removing the devices should be equipped with a two-way radio or other means of communication.

Traffic Control Person (TCP)

A TCP means any person designated or assigned to direct traffic on a public road or on a construction site.

Training

A worker who is required to direct traffic shall be a competent person and will:

- Be trained as a traffic signaler and as a TCP.
- Successfully complete a recognized TCP training course based on the material in the MTO Book 7.
- Carry proof of training on their person at all times when performing the duties of a TCP.
- Be equipped with personal protective equipment including head protection, CSA certified safety footwear, approved traffic vest and eye/ear protection at a minimum.
- Will remain focused on their task and will not perform other tasks while directing traffic.
- Be positioned in such a way that he or she is endangered as little as possible by vehicular traffic.

Trenching

Trenching fatalities are mainly caused by cave-ins. Another significant cause of injury concerning trenching involves contact with power lines. Over half of all power line contacts involve buried cable. Before excavation, the gas, electrical and other services in the area must be accurately located and marked. (see *Underground Utilities*).

Factors to Consider for the Prevention of Cave-Ins

Soil Types

Soil types can be divided into four types. It is the supervisor's responsibility to be aware of the four types of soil that may be encountered by the work crew during the work. Soil around trenches will vary greatly especially along the length of the trench and from top to bottom. The supervisor must plan for suitable and appropriate protection depending on the soil types to be encountered. A description of soil types is as follows;

- 1 Type one soil is the safest for trenching. Though it is not rock it is as hard as rock and is very difficult to penetrate. The sides of the trench will appear smooth and shiny. The soil is very stable in sunlight and wet weather.
- 2 Type two soils can be excavated easily. A pick can be driven into it relatively easily. The sides of the trench will remain vertical for a short period of time. As walls are left exposed to the air and/or sunlight, tension cracks will appear. The soil will crack and begin to spread into the trench.



- 3 Type three soils consist of previously excavated materials, sand, other granular materials and wet clay. It will not stand vertically and the excavation will cave in. When dry, type three soils will flow through the fingers. This soil is very susceptible to degradation when exposed to vibration.
- 4 Type four soils can be excavated easily and will flow with no difficulty. It is a very wet soil and, therefore, very sensitive to vibrations caused by heavy materials.

Moisture type

Too much moisture caused from rain, melting snow, overflow from streams, storm drains and sewers will reduce the cohesion of the soil. Insufficient moisture will also increase the risk. The longer the trench is open to the air, the greater the risk.

Vibration

Trenching walls are often subjected to vibration from various sources that can create and contribute to the collapsing of the trench walls. Sources of vibration include compaction, pile driving, earth moving, vehicle traffic, blasting and/or other construction operations. Any of these can compromise the walls of the trench.

Surcharge

An excessive weight on the edge of a trench caused by heavy equipment or the placement of excavated materials increases the risk of cave-ins. A space of at least one (1) meter (3 feet) from the edge of the trench to the toe of the surcharge would be a minimum requirement.

Previous Excavation

When a trench is dug beside or through a previous excavation, the soil may be loose and unable to support itself. The soil should be assumed to be unstable. Any previous excavation in close proximity to the new trenching can be classified a Type 3 soil, as classified by the Regulations for Construction Projects, and may not stand up unless suitable protection such as sloping or shoring is implemented.

Existing Foundations

When there is a foundation of a building adjacent to a trench being worked on, there is a possibility of a cave-in. A failure zone exists around most trenches. Foundations of a nearby building extending into this failure zone may result in cave-in. Any surcharges, other disruptions or changes in the condition of the soil could cause a collapse. The soil in these situations should be treated as loose and unstable. Consider it to be Type 2.

Weather

Particularly as seasons change, careful planning must take weather elements into consideration. Rain, snow, melting snow, thawing earth, overflow from storm sewers, drain, adjacent streams will all produce a change in the soil conditions. Water or liquid from any source can increase the rate of seepage and can result in the reduction of the cohesion in the soil. The stability of a trench can alter drastically overnight because of a change in the weather. When weather conditions change, the stability of the soil should be re-assessed for hazards.

***Warning: The level of frost goes only so deep.
Do not reduce shoring.***

Working Alone

As per regulation 225 found in the Regulations for Construction, "Work shall not be performed in a trench unless another worker is working above ground in close proximity to the trench or to the means of access to it."

Protection Against Cave-Ins

Trench Boxes

The Purpose of trench boxes is to provide protection for workers in the event of a cave-in. They are not meant to provide support for trench walls or to shore up walls. If the space between the trench wall and the box has been backfilled, they are then capable of supporting the trench walls.



- Workers must stay within the trench box at all times.
- No workers may be in the trench box when it is being moved.
- A ladder, properly tied off and long enough to extend at least one meter above the box, must be set up in the trench box at all times.

Sloping

Prior to utilizing this method, the supervisor must determine the soil type, and the best angle of the slope that soil conditions will allow. Conditions may allow a slope that is steep (Type 1 & 2 Soil) to a very gradual slope (Type 4 Soil). At the top of shoring or trench boxes, it is considered a good safety practice to cut a bench.

Shoring

Shoring is a system, which supports trench walls to prevent the movement of soil. If there is a delay between excavation and shoring, no one must be allowed to enter the unprotected trench.

The two types of shoring most commonly used are timber and hydraulic. Both consist of posts, wales, struts and sheathing. Hydraulic shoring means prefabricated strut and/or wale systems in aluminum or steel. Design drawings and specifications for prefabricated shoring systems must be kept on site.

One of the major advantages of hydraulic shoring over some applications of timber shoring is safety during installation. Workers do not have to enter the trench to install the system.

Sheathing must be of sound Number 1 grade spruce and must be placed against the side of the excavation so that it is vertical. It must be secured in place by the wales and must be driven into the soil and firmly secured in place if the excavation is made in Type 3 or 4 soil.

Struts must be of sound Number 1 structural grade spruce and placed in the excavation so that it is horizontal and at right angles to the wales. They shall be cut to the proper length and held in place by at least two wedges driven between the strut and the wales. Struts must be cleated with cleats that extend over the top of the strut and rest on the wales or that are attached securely to the wales by spikes or bolts.

Every wale shall be made of sound Number 1 structural grade spruce and shall be placed in the excavation so that it is parallel to the bottom or proposed bottom of the excavation and shall be supported by either cleats secured to the sheathing or posts set on the wale next below it or, if it is the lowest wale, on the bottom of the excavation.

Trench Boxes

Trench boxes shall be certified by a professional engineer and assembled, inspected and maintained in accordance with the engineering or manufacturer's specifications.

Excavation must be done so as to minimize the space between the trench box and the excavation to allow closer access to the top of the box and to limit soil improvement in the vent of a cave in. If this is not possible, soil must be backfilled around the box after installation to prevent it from moving if a cave in occurs

Trench boxes shall have continuous sides and must extend a minimum of 300 mm (12 inches) above the vertical wall of the excavation

The boxes must be placed and secured in the excavation prior to entry by workers and access ladders must be placed inside the box. Workers are to remain in the box as long as they are inside the trench and must leave when the box is being moved

Ladders

Ladders play a significant role in the safety of workers doing trench work. No matter what type of protection is being used - boxes, sloping or shoring - ladders should be installed in all trenches allowing workers to enter or exit safely at all times.



- Inspect ladders regularly for damage.
- Ladders must extend at least one (1) meter (3 feet) above the shoring or trench box.
- Ladders must always be securely tied off at the top.
- Ladders must always be placed within the areas that the shoring or trench box is protecting.
- Ladders must be placed as close as possible to the worker and should never be more than 7.5 meters (25 feet) away.

Inspections

Regardless what protective system is being used, it should be inspected on a regular basis. The inspection is everyone's responsibility. Conditions and materials that should be inspected include, but are not limited to:

- Trench boxes should be inspected for such hazards as: cracks in welds, structural damage and other defects. Immediately report to the supervisor if the box begins to shift or if it is settling in an uneven manner.
- The ground surface should be inspected for cracks caused by tension which usually occurs parallel to the trench at a distance one-half to three-quarters of the depth of the trench. If you do detect cracks, advise the supervisor and the crew working in the trench. Check all protective systems thoroughly.
- Timber shoring should be inspected for deficiencies. Wales should be inspected for signs of crushing. The crushing wales usually indicates that there is structural inadequacy and indicates the need for more struts.
- Hydraulic shoring should be inspected regularly for leaking hoses and cylinders, cracked or broken nipples, bent bases and other damages or defective parts.

Emergency Procedures - Gas Leaks

If a leak is suspected:

- Evacuate the immediate area.
- Contact the gas company.
- Evacuate the people in the building the gas line services.
- Instruct all evacuees to leave doors and windows open, shut off appliances, furnaces and other sources of ignition.
- Allow no one to return to the area/building until the gas company declares it safe.

Electrical Contact

Should a worker make contact with an energized source of electricity:

- Do not touch the worker or the area around the worker.
- Call the utility and have the power shut off.
- Only when the utility company declares it safe to do so, should the worker be approached.

Contaminated Soil

If contaminated soils are encountered during excavation/trenching, immediately suspend trenching operations and your supervisor.

Cave-Ins

It is natural to try to rescue workers caught or buried by a cave-in, but care must be taken to prevent injury or death to the rescuer.

- Use a tarpaulin, fencing, plywood or similar materials to cover the ground. These materials will ride up over any further cave-in.
- Rescuers should enter the trench with ropes and wear rescue harnesses if possible.
- To prevent further injury, remove the worker on a stretcher – tarps or ladders can be used as makeshift stretchers.

An Important Point to Always Remember!

Unless the walls are solid rock, a worker should never enter a trench deeper than 1.2 meters (4 feet) unless it is properly sloped, shored, or protected by a trench box.



Underground Utilities

Contact with underground utilities such as gas, electrical, telephone and water lines can cause injury and/or considerable expense and must be avoided .

It is the responsibility of the contractor to ensure that all underground utilities are located and clearly marked. Underground utilities may be marked using labeled stakes, flags and/or paint lines. Markers will be placed at the centerline of the underground utility.

Don'ts:

- Never work in an area where underground utilities are not clearly marked.
- Never work outside of the area covered by the locate stakeout information.
- Whenever possible, do not work within one meter of a stakeout area.

Emergency Procedures

Electrical Lines

Do's:

- Keep other workers away from the equipment in contact.
- If possible, break contact by moving the machine away.
- If it is not possible to break contact, the operator should stay on the equipment until the source of electricity is de-energized by Hydro.
- In an emergency situation that would pose a greater risk to the operator, the operator should jump from the equipment as far from it as possible keeping both feet together when landing and then take small steps to move farther away.

Gas Line

Do's:

- Call the gas company immediately.
- Put out smoking materials and shut off other sources of ignition such as engines and equipment.
- Evacuate the area until the gas company declares the area to be safe.
- Should an interruption in service to a home or building occur people inside should be advised to open doors and windows, turn off appliances and all sources of ignition (furnace etc.) and vacate the building.

Vehicle Safety

A company vehicle, when not used for business purposes, may be driven for personal use. At no time should a driver allow unauthorized persons to operate the vehicle assigned to them. To do so, would subject the assigned driver to disciplinary proceedings and may result in employment termination.

As a condition of employment, and periodically thereafter, the company may ask drivers to produce a Ministry of Transportation (MTO) Driver History form. If this record indicates any of the following reported incidents, the driver may be immediately suspended or terminated at the discretion of management:

- Convicted of a drug or alcohol offense.
- Refusal to submit to a Blood Alcohol Content test.
- Conviction for reckless or dangerous driving.
- Any combination of three or more "at fault accidents" or "preventable accidents".
- Leaving the scene of an accident.
- At fault in a fatal accident.
- Felony committed involving a vehicle.
- Three or more physical damage claims to a company vehicle within any twelve-month period.

**Do's:**

- Keep the vehicle clean, orderly and in a presentable state at all times.
- Perform daily circle checks.
- Report any and all mechanical defects to Dolyn Construction Ltd. immediately.
- Follow any and all posted speed limits.
- Operate the vehicle in compliance with the Ontario Highway Traffic Act and other applicable laws and regulations.
- Use a signaler if the operator cannot clearly see the work and/or when backing up.
- Report any traffic violations, both moving and parking, to management immediately.
- Pay all fines received when you are the authorized driver responsible for the vehicle.
- Maintain three-point contact when mounting or dismounted vehicles.
- Wear seatbelts as required.
- Ensure company vehicles are secure when left unattended.

Don'ts:

- Smoking in any company vehicle is not permissible.
- At no time alter or modify a vehicle in any manner.
- Never remove, deface, obscure or obliterate any inscription or cause any other person to do so.

Ventilation

A project must be adequately ventilated by natural or mechanical means if a worker may be injured by inhaling a noxious gas, vapour, dust or fume or from a lack of oxygen or if a gas, vapour, dust or fume may be capable of forming an explosive mixture with air.

If it is not practicable to provide natural or mechanical ventilation respiratory protective equipment suitable for the hazard must be provided to and used by the workers.

If the dissemination of dust is a hazard to a worker, the dust must be adequately controlled or each worker who may be exposed to the hazard it to be provided with adequate personal protective equipment.

There are a couple of simple methods for ensuring good quality air through prevention or by providing adequate ventilation when necessary.

- Whenever possible, windows and doors should be opened to allow harmful vapours to escape.
- Heating and cooling system should be turned off to stop vapours from circulating through the work area and any common area.
- A box fan can be used in an open door or window to draw vapours out or fresh air into a work area.
- If possible, water based products should be used (filler, varnish etc.).
- Any fire hazards should be removed or eliminated from affected work areas.
- There should be no smoking or open flames in the work area.

WHMIS 2015

Do's:

- Read and follow instructions as written on the WHMIS label.
- Report any WHMIS controlled product which does not have a label or when it has become illegible.
- When required, attach a worker label identifying hazards and controls and reference to the SDS.
- Know the location of WHMIS controlled SDSs and refer to them to obtain additional information.
- Carry proof of WHMIS training on your person at all times.
- Only use WHMIS controlled products if you have been given adequate instruction.

Old WHMIS Symbols

The following symbols, and a slashed border, indicate that a product is WHMIS controlled.



The graphic below shows hazard pictograms. The bold type is the name given to the pictogram; the words in the brackets describe the hazard.

	Exploding bomb (for explosion or reactivity hazards)		Flame (for fire hazards)		Flame over circle (for oxidizing hazards)
	Gas cylinder (for gases under pressure)		Corrosion (for corrosive damage to metals, as well as skin, eyes)		Skull and Crossbones (can cause death or toxicity with short exposure to small amounts)
	Health hazard (may cause or suspected of causing serious health effects)		Exclamation mark (may cause less serious health effects or damage the ozone layer*)		Environment* (may cause damage to the aquatic environment)
	Biohazardous Infectious Materials (for organisms or toxins that can cause diseases in people or animals)				

* The GHS system also defines an Environmental hazards group. This group (and its classes) was not adopted in WHMIS 2015. However, you may see the environmental classes listed on labels and Safety Data Sheets (SDSs). Including information about environmental hazards is allowed by WHMIS 2015.

Working Alone

Do's:

- Report all hazards/incidents immediately to head office.
- Wear all personal protective equipment required by the employer.
- Workers required to work alone must be in possession of an effective means of communication.
- If required, report to head office at the pre-scheduled check-in times.
- Work in a manner that will not cause harm to self or others present.
- Report any concerns of this program to the supervisor or head office immediately.

Working at Heights

Do's:

- Work in compliance with regulations and with company policies.
- Adopt fall protection strategies whenever you are at risk of falling from heights.
- Inspect fall protection equipment before use and report defects to supervisor.
- Report any fall hazards to supervisor.
- Wear fall arrest and be tied off to either a fixed support or a lifeline when they are:
 - ♦ 10 feet or more above the floor or ground;
 - ♦ Working above operating machinery; and



- ♦ Working above hazardous substances or objects.

Don'ts:

- Work in an area where fall protection is missing/inadequate unless wearing fall arrest/travel restraint equipment.
- Never work in an area where fall protection is required unless you have been adequately trained.

Rescue Procedures

In the event that a worker wearing required Fall Protection should fall to a suspended position, a rescue must be performed. It is for this reason that no person required to wear fall protection of any type is allowed to work alone. The rescuer will use one of the following methods to safely reach and rescue the suspended worker:

- A ladder.
- If there are an adequate number of rescuers to prevent back strain, then the suspended worker may be hauled to safety. Keep in mind that those doing the hauling must be wearing fall arrest PPE.
- If available, an elevating work platform may be used to safely reach and rescue the suspended worker.
- If a rescue cannot be performed safely, then the rescuer will call 911 for assistance.
- If it is suspected that a rescue cannot be performed successfully in 20 minutes, call 911 immediately for help.
- If the worker falls such that an electrical hazard may threaten the worker and/or rescuers, if possible safely disconnect the power source or call Hydro immediately to have the power disconnected. If the worker has sustained medical injuries as a result of the fall, proceed with medical procedures as outlined in the company *First Aid and Medical Procedures policy*.

Safe Work Practices**Full Body Harnesses, Lanyards and Shock Absorbers**

- All full body harnesses, lanyards and shock absorbers must be CSA-certified.
- Full body harnesses must be snug fitting and worn with all hardware and straps intact and properly fastened.
- Lanyards must be 16 millimeters (5/8") diameter nylon or equivalent.
- Lanyards may or may not be equipped with a shock absorber as required.
- All components of a system must be removed from service if used to arrest a fall.
- Safety belts are only to be used for travel restraint.

Lifelines

- All lifelines must be:
 - ♦ 16 millimeters (5/8") diameter polypropylene or equivalent;
 - ♦ Free from any danger of chafing;
 - ♦ Free of cuts, abrasions and other defects;
 - ♦ Secured to a solid object.
- Only one person at a time may use a vertical lifeline.
- Horizontal and vertical lifelines must be free of knots other than those used to connect it to a fixed support.
- Lifelines must be long enough to touch to ground or knotted or otherwise to provide a positive stop to prevent the lanyard from running off the vertical lifeline.

Rope Grabbing Devices

- To attach the lanyard of a full body harness to a lifeline, use a mechanical rope grab that has been CSA-certified. Look for the CSA certification stamp.

Anchor

- A permanent anchor that meets the Building Code should be the primary consideration when selecting a fixed support to tie off fall protection systems.
- An anchor must be able to support 3,500 lbs.

Floor Openings

**Do's:**

- Floor covers must be secured in place and be able to support all expected loads.
- Floor covers may be made of planks, plywood or steel plates.
- Planks used as floor covers must be made of 2" X 10" No. 1 Spruce.
- Make opening covers stand out with bright paint. Include a warning sign such as "DANGER! OPENING – DO NOT REMOVE! – DO NOT LOAD!"

Guardrails and Barricades

Guardrails are the most reliable and convenient means of protection and must always be chosen as protection when possible.

Areas to be protected by guardrails, when a worker has access to an unprotected edge and is exposed to a fall of 10 feet or more include but are not limited to:

- A floor, including the floor of a mezzanine or balcony.
- A roof while formwork is in place.
- A scaffold platform or other work platform, runway or ramp.
- Openings in floors, roofs and other working surfaces.
- Edges of slab formwork for floors and roofs.
- Location where worker may fall into water, operating machinery or hazardous substance.

Do's:

- Guardrails must consist of top rail, mid rail and toe board secured to vertical supports.
- Top rail must be between 3' and 3'6" high.
- Toe board must be 3-1/2" wide and be installed flush to the bottom surface.
- Upright posts must be no more than 8' apart for wooden system and 10' for metal systems.
- Posts extending to top rail must be braced and solidly fastened to the floor or slab.
- Shoring jacks used as posts should be fitted with plywood softener plates top and bottom.
- Guardrails may be strengthened by reducing the distance between upright posts.
- When guardrails need to be removed, open edges should be roped off and marked with warning signs or yellow "danger" tape. Workers in the area must use a fall-arrest or travel restraint system until guardrails are re-installed.